UNIV. OF
TORONTO
LIBRARY

P
Med
M

Van De Warker.

# THE
# MEDICO-CHIRURGICAL
# REVIEW,
# AND
# JOURNAL
# OF
# PRACTICAL MEDICINE.

(American reprint)

(*NEW SERIES.*)

VOLUME TWENTY-TWO.

[1st of OCTOBER, 1834, to 31st of MARCH,]

1835.

---

VOL. II. of DECENNIAL SERIES.

---

EDITED

BY JAMES JOHNSON, M.D.

PHYSICIAN EXTRAORDINARY TO THE KING,

AND

HENRY JAMES JOHNSON, ESQ.

LATE HOUSE SURGEON TO ST. GEORGE'S AND THE LOCK HOSPITALS.

412961
12.6.43

REPUBLISHED
BY RICHARD & GEORGE S. WOOD,
No. 261 PEARL-STREET,
NEW-YORK.

# INDEX.

A.

- Acarus scabiei, report on the 507
- Aconitine, Dr. Turnbull on 434
- Aconitine, preparation of 435
- Algiers, medical statistics of 509
- Amaurosis, treated by strychnine 560
- Amenorrhœa, report on, by Dr. Carbutt 255
- Amenorrhœa, treatment of, by irritation of the mammæ 511
- Anatomical pathology of the nervus vagus 170
- Anatomy, Mr. Quain's treatise on 137
- Anatomy of the lymphatic system 220
- Anatomy bill, complaints against the, 588
- Andral, M. his clinique médicale 398
- Aneurism by anastomosis, treated by caustic 512
- Animation, suspended, recovery from, 434
- Annesley, Mr. on dysentery 425
- Antimony after wounds, &c. 193
- Arachnoid, diseases of the 402
- Armstrong, Dr. memoir of his life, by Dr. Boott 69
- Arsenic, detected after 14 months' interment 464
- Arteries, thesis on the different modes of obliterating 89
- Assistants to hospitals, plurality of 168
- Austrian system of medical education 272

B.

- Beaumont, Dr. his experiments on the gastric juice 49
- Bellingeri on fascial neuralgia 225
- Biceps flexor cubiti, rupture of tendon, 432
- Birmingham school of medicine 581
- Bladder, Mr. Guthrie on diseases of the 107
- Bladder, anatomical description of the, 108
- Bladder, disease of its "elastic structure" 111
- Bladder, pouches in the 111
- Bladder, "fluttering blow of the" 112
- Bladder, chronic thickening of the 135
- Bladder, Mr. Crosse on calculi in the, 321
- Bladder, chronic inflammation of the, 322
- Bladder, sacculi of the 323
- Bladder, disease of kidneys from stone, 325
- Bladder, on sounding for stone in the, 326
- Blood, Mr. Thackrah on the 368
- Blood, size of its globules 371
- Blood, components of 371
- Blood, coagulation of the 373
- Blood, arterial and venous 376
- Blood, affected by the states of the animal system 377
- Blood, milky appearance of 378
- Blood, state of, in its vessels 379
- Blood, states of, in disease 380
- Blood, purulent alteration of the 500
- Blundell's, Dr. practice of obstetricy 73
- Blundell, Dr. on hidriotic fever 75
- Boott, Dr. his life of Dr. Armstrong 69
- Boott, Dr. on marsh fever 69
- Bostock, Dr. on the pathology of the urine 454
- Botany, Mr. Burnett's outlines of 436
- Bouillaud's refutation of Majendie's theory of the sounds of the heart 231
- Brain, functional disturbances from lesions of the 410
- Brodie, Sir B. on hæmorrhoids 564
- Brodie, Sir B. on prolapsus recti 571
- Brodie, Sir B. on excrescences of the rectum 573
- Broussaisism, strictures on 209

C.

- Calculi, chemical composition of 308
- Calculi, growth of 309
- Calculi in the kidneys and ureters 312
- Calculi in the urethra 316
- Calculi in the prostate 318
- Calculi in the bladder 321
- Calculi removed by the urethra 332
- Calculi, small and large, symptoms of 332
- Calculi, *mode* of removing per urethram 333
- Calculous complaints in India 187
- Calculous diseases, causes of 306
- Calculous, Mr. Crosse's treatise on the, 305
- Carbutt, Dr. his clinical report 246
- Carditis, cephalitis, case of 153
- Cataract, memoranda on 542
- Caustic for aneurism by anastomosis 512
- Cervical vertebræ, remarkable distortion of 557
- Chloruret, for the removal of putrid corpses 526
- Cholera, Dr. Hawthorne on 156
- Cholera, Mr. George on 483
- Cholera, souvenirs du, a poem 535
- Chorea, Dr. Carbutt's report on 246
- Chyme, Dr. Beaumont's description of, 66
- Clinique médicale, M. Andral's 398

Circulation, Harvey *said* not to have discovered . . . . . . 31
Cloquet, M. Jules, his description of the anatomy of hernia . . . . 382
Concours, for the clinical chair of surgery . . . . . . . 79
Concours, thesis on lithotomy and lithotrity . . . . . . . 79
Concours, thesis on hæmorrhoids and prolapsis recti . . . . . 89
Concours, thesis on the methods of obliterating arteries . . . . 89
Concours, appeal of French surgeons against its violation . . . . 533
Conjunctiva, sensibility of the . . . 562
Convulsions, tetano- epileptic, case of, 449
Corrosive sublimate, poisoning by . 515
Crepitatio musculorum, Dr. Johnson's case . . . . . . . . 168
Crosse, Mr. on the urinary calculus . 305
Crural canal, anatomy of . . . . 393
Cutaneous diseases; Willan's arrangement best . . . . . . 206

D.

Dead, the mighty . . . . . 161
Death from hanging, observations on . 518
Death, difficulty of determining its causes . . . . . . . 519
Deaths of kings, Sir H. Halford on the 585
Delirium, as a symptom, M. Andral on 415
Dentology, Mr. Bell on . . . . 487
Dentology; a poem! by Solyman Brown, A. M. . . . . . . 487
Diaphragm, laceration of the—legal question . . . . . . . 529
Digestion, solution of the food during 60
Digestion, time required for . . 62
Digestion, muscular actions of the stomach during . . . . . 64
Digitalis used endermically . . . 207
Dislocation of Femur, proposed in morbus coxæ . . . . . . 183
Ductus choledochus, obstruction of the 187
Dupuytren, M. on fractures of the carpal end of the radius . . . 216
Dura mater, diseases of the . . . 399
Dura mater, lesions of the . . . 407
Dysentery, endemic . . . . . 154
Dysentery, Mr. Annesley on . . . 425
Dysentery, treatment of . . . . 428

E.

Ear, pendulous tumor from the . . . 186
Edwards, Dr. on the physiological characters of the races of mankind . 189
Elbow-joint, Mr. Guthrie on injuries of the . . . . . . . 257
Endemic dysentery . . . . . 154
Endermic use of digitalis . . . . 207
Endermic medication, Dr. Sigmond on 492
Enteritis, Dr. Griffin on . . . . 477
Enteritis, purging in . . . . . 479
Epidermis of infants, exfoliation of the 541
Erysipelas, Dr. M'Dowel on . . . 162
Eye, Mr. Wardrop's morbid anatomy of the . . . . . . . . 140

F.

Fees, a legal claim in France . . . 538
Fibrous tumors of the uterus, Messrs. Dupuytren, Boivin, and Dugès on . 34
Fibrous tumors of uterus, varieties of 35
Fibrous tumors of uterus, symptoms of 44
Fistula lacrymalis, catgut bougie for . 564
Fracture, ununited, cured by friction . 177
Fracture, compound, of tibia . . . 243
Fractured ribs, cases of . . . . 241
Fractured femur—no union . . . 242
Frottement in peritonitis . . . . 160

G.

Gastric juice, Dr. Beaumont's experiments on the . . . . . . 49
Gastric juice, extraction of for experiment . . . . . . . . 51
Gastric juice, properties of the . . . 51
Gastric juice, composition of . . . 52
Gastric juice, solvent power of . . . 52
Gastric juice, Tiedeman and Gmelin on 53
Gastric juice; do other fluids exert its solvent power . . . . . . 55
Gastric juice, its action in digestion . 57
Germany, midwifery in . . . . 193
Germany, sarsaparilla in . . . . 194
Germany, medical literature of . . . 194
Gout, Dr. Leese on . . . . . 151
Graves, Dr. his introductory lecture . 583
Green, Dr. on the non-mercurial treatment of syphilis . . . . . 265
Griffin, Messrs., on affections of the Nerves . . . . . . . . 1
Griffin, Dr. on enteritis . . . . 477
Gums, Mr. Waite on the . . . . 474
Guthrie, Mr. on diseases of the bladder 107

H.

Hæmorrhage after lithotomy . . . 342
Hæmorrhage from the internal pudic 346
Hæmorrhage, deep, after lithotomy . 347
Hæmorrhoids and prolapsus recti . 204
Hæmorrhoids, Sir B. Brodie on . . 564
Hæmorrhoids, nature of . . . . 564
Hæmorrhoids, abscess connected with 565
Hæmorrhoids, protrusion of . . . 566
Hæmorrhoids, treatment of . . . 567
Hæmorrhoids, operation for . . . 568
Halford, Sir Henry, on the deaths of kings . . . . . . . . 585
Harvey, his claims to the discovery of the circulation denied . . . . 31
Hawkins, Mr. on injuries of the nerves 234

Hawthorne, Dr. on cholera . . . 156
Head, injuries of, followed by mania . 256
Head, injuries of, Mr. Guthrie on . 257
Head, injuries of, report on . . . 259
Health, Dr. Smith's philosophy of . 421
Health, public, on agencies affecting . 524
Heart, malignant tumors of the . . 357
Heart, diseased, case of . . . 461
Hemicrania, case of . . . . 430
Hemiplegia in pregnancy . . . 152
Hepatized spleen, case of . . . 272
Hernia, M. Cloquet's anatomy of . 383
Hernia, inguinal, anatomy of . . 383
Hernia, femoral, anatomy of . . 392
Hernia, anatomy of the epigastric and obturatrix arteries in relation to . 396
Hidrosis, Dr. Blundell on . . . 75
Hints on sloughing fauces, . . . 145
Hints on diabetes, . . . . 145
Hints, miraculous . . . . 146
Hip diseased, femur proposed to be dislocated in . . . . . 183
Hospital for lithotrity, . . . . 589
Hunger, theory of . . . . 68
Hydatids, formation of . . . 431
Hydrocephalus, case of . . . 430
Hydro-ferro-cyanate of quinine, . . 211
Hydrophobia, Mr. Pettigrew on . . 180
Hypertrophy of the mammæ, . . 179
Hysteria, epileptic curious case of . 229

I.

Impotence, anecdotes of . . . 523
Infanticide suspected — medico-legal consultation . . . . . . 527
Infants, peculiar affection of lungs in . 460
Infants, exfoliation of the epidermis of 541
Influenza in Edinburgh . . . 432
Ingleby, Dr. on the signs of pregnancy 468
Inguinal canal, anatomy of the . . 389
Injuries of the nerves, Mr. Hawkins on 234
Injuries of the head, report on . . 259
Insanity, Dr. Prichard on . . . 442
Insanity, varieties of . . . . 442
Insanity; monomania. . . . 444
Insanity; mania . . . . . 445
Insanity; dementia . . . . 446
Insanity, terminations of . . . 447
Irritation of the spinal cord, Mr. Stanley on . . . . . . . 353
Itch-insect, Institute report on the . 507

J.

Jaundice, cases of by Dr. Carbutt . 248
Johnson, Dr. his case of gastric neuralgia . . . . . . . 166
Johnson, Dr. his case of crepitatio musculorum . . . . . . 168
Johnson, Dr. on the Baths of Pfeffers, 281
Johnson, Dr. his case of tetano-epileptic convulsions . . . . . 449
Johnson, Dr. on acute and chronic rheumatism . . . . . . 460
Johnson, Dr. his cases of diseased kidneys . . . . . . . 484
Johnson, Mr. H. J. on venereal ulcers of the rectum . . . . . 574

K.

Kidneys, on calculi in the . . . 312
Kidneys, diseased, in connexion with irritation of the spinal cord . . 353
Kidneys, some cases of disease of the . 484
Kidneys, disease of, marked by symptoms of disease in the bladder . . 484

L.

Labour, difficult, from malposition of head . . . . . . . 173
Labour, varices of vagina ruptured in, 224
Laceration of the diaphragm — legal question . . . . . . 529
Latham, Mr. on uterine hæmorrhage, 150
Lee, Dr. on the pathology of the uterus . . . . . . . 364
Liquor potassæ in Cholera . . . 483
Liston, Mr. on diseases of the rectum, 489
Litho-cystotomy, Mr. Crosse on . . 336
Litho-cystotomy, mode of performing, 337
Litho-cystotomy, treatment after. . 339
Litho-cystotomy, inflamed bladder after 340
Litho-cystotomy, diffuse cellular inflammation after . . . . 340
Litho-cystotomy, nervous exhaustion after . . . . . . . 340
Litho-cystotomy, perineal fistula after, 341
Litho-cystotomy, wound of rectum in, 342
Lithotomy and lithotrity, Concours Thesis on . . . . . . 79
Lithotomy, causes of death after. . 113
Lithotomy in India . . . . 187
Lithotomy in Italy . . . . 190
Lithotomy and lithotrity, comparative cases of . . . . . . . 196
Lithotomy, hæmorrhage after . . 342
Lithotomy, tables shewing the results, 349
Lithotrity, death from . . . . 199
Lithotrity, Mr. Crosse on . . . 335
Liverpool Ophthalmic Infirmary, report of . . . . . . . 559
Lunatic asylum in Germany . . 476
Lungs, peculiar affection of in infants, 460
Lymphatic system, anatomy of the . 220

M.

M'Cormac, Dr. on fever . . . 496
M'Dowel, Dr. on erysipelas . . . 162
Macfarlane, Dr. his report on tumors, 545
Mammæ, hypertrophy of the . . 179
Mammæ, irritation of, for amenorrhœa, 511
Man, physiological characters of his races . . . . . . . 189

Maniacal symptoms after injuries of the head . 256
Marsh fever, Dr. Boott on . 69
Mayo, Mr. his introductory lecture . 141
Medical education in Austria . 272
Medical opinion, state of in Paris 497
Medical men, responsibility of, in France . 536
Medical men; fees a legal claim in France . 538
Medical superstitions in France . 543
Medico-chirurgical Transactions of Edinburgh. Fas. II. . 429
Melanosis of the eye-ball . 221
Mercurial and non mercurial treatment of syphilis . 264
Miasmata, matter detected in . 223
Midwifery, wretched in Germany . 193
Montgomery, Dr. on difficult labour . 173
Morbid anatomy of the eye, Mr. Wardrop's . 140
Murder from monomania . 520
Murder detected from the skeleton, 12 years after death . 521
Muscles of the shoulder, partially ossified in young recruits . 514

N.

Nephritis acute, case of . 452
Nerves, Messrs. Griffin on affections of the . 1
Nerves, Mr. Hawkins on injuries of the 234
Neuralgia, gastrica, Dr. Johnson's case 166
Neuralgia, facial, Bellingheri on . 225
Neuralgia of leg and foot—sciatic nerve cut . 229
Neuralgia, case of . 244

O.

Obstetricy, Dr. Blundell's practice of, 73
Orbital linings, case of inflammation of, 430
Ossification of the deltoid . 514
Outlines of botany, Mr. G. Burnett's, 436

P.

Paris, state of medical opinion in . 497
Paternity, French laws on . 524
Peritonitis, Trottement . 160
Pettigrew, Mr. on hydrophobia . 180
Pfeffers, Dr. Johnson on the baths of . 281
Phlebitis, from tying varicose veins . 264
Phlebitis, traumatic, cases of . 503
Phlegmasia dolens, case of . 173
Philosophy of health, Dr. Smith's. . 421
Phrenology, human and comparative, 221
Phthisis mistaken for diseased heart . 171
Phthisis, incipient, relieved . 177
Pia mater, diseases of the . 402
Pia mater, lesions of the . 408
Pleasure, the end of existence . 423
Pleuro-pneumonia, case of . 155
Pneumo-gastric nerve, pathology of . 170
Pneumo-gastric nerve, pathology of . 218
Poisoning by arsenic, detection of, after 14 months . 464
Poisoning by corrosive sublimate . 515
Poisoning detected 7 years after death, 523
Poisoning with belladonna . 528
Polypi of the uterus, M.M. Dupuytren, Boivin and Dugés on . 34
Polypi of uterus, description of . 35
Polypi of uterus, termination of . 38
Polypi of uterus, causes of . 40
Polypi of uterus, examination for . 42
Polypi of uterus, distinguished from inversion of the uterus . 45
Polypi of uterus, M. Dupuytren's treatment of . 46
Polypus of the bladder simulating stone . 329
Population returns—influence of crowding . 582
Practical hints, Dr. Peacock's . 145
Pregnancy, signs of . 468
Pregnancy, vomiting in . 469
Pregnancy, sanguineous discharges in, 469
Pregnancy, state of the breasts in . 469
Pregnancy, fætor of discharges in . 469
Pregnancy, state of os uteri in . 470
Pregnancy, state of hypogastrium in . 471
Pregnancy, obliquity of uterus in . 472
Pregnancy, fœtal movements in . 473
Pregnancy, auscultation during . 474
Prichard, Dr. on insanity . 442
Prolapsus recti and hæmorrhoids . 204
Prostate gland, abscess of the . 133
Prostate gland, enlargement of . 134
Prostatic calculi, Mr. Crosse on . 320
Public spirit of the surgeons of Paris . 533
Pudic, internal artery, hæmorrhage from the . 346
Purulent alteration of the blood . 500
Putrid corpses, removed without danger . 526

Q.

Quain, Mr. his treatise on anatomy . 137
Quinine, hydro-ferro cyanate of . 211
Quinine, monstrous doses of . 245

R.

Radius, M. Dupuytren on fracture of its carpal extremity . 216
Rectum, Mr. Liston on disease of the . 489
Rectum, Sir B. Brodie on prolapsus of the . 571
Rectum, Sir B. Brodie on excresences of the . 573
Rectum, Mr. H. J. Johnson, on venereal ulcers of . 574
Responsibility of medical men in France . 536

Retention of urine, operations for . 128
Rheumatism, cases of, by Dr. Carbutt, 251
Rheumatism, Dr. Johnson on . . 461
Rheumatism, acute, nature and treatment of . . . . . . . 504
Rhinoplastic, performed by Dieffenbach 544
Right-handed; why are we so? . . 587

S.

Sarsaparilla in Germany . . . 194
Salt, Doctor Mateer on the injurious effects of . . . . . . . 480
Scarlatina, epidemic in Heriot's hospital . . . . . . . . 433
Sciential medicine, Mr. Eden's . . 362
Scott, Mr. on tic douloureux . . 97
Secale cornutum as an emmenagogue, 233
Serum, blue from a blister . . . 213
Sigmond, Dr. on endermic medication, 492
Sims, Dr. on malignant tumors of the heart and lungs . . . . . 357
Smith, Dr. his philosophy of health . 421
Solanine in potatoes . . . . . 206
Sounding, Mr. Crosse on . . . 326
Sounding, by the catheter . . . 328
Sounding, *rotatory* . . . . . 328
Sounding, dangers of . . . . . 329
Spinal cord, functional affections of the 3
Spinal cord affections of its cervical portion . . . . . . . . 9
Spinal cord, affections of the dorsal portion . . . . . . . . 19
Spinal cord, affections of the lumbar portion . . . . . . . . 20
Spinal cord, general irritation of the, 21
Spinal irritation, resembling inflammation . . . . . . . . 22
Spinal inflammation, acute . . . 24
Spinal irritation, treatment of . . 27
Spinal dura mater, Professor Albers on inflammation of the . . . . 227
Spinal cord, extravasation of blood on, 263
Spinal cord, Mr. Stanley on irritation of the . . . . . . . 353
Spine, scrofulous caries of the, curious case of . . . . . . . 557
Stomach, state of, during digestion . 59
Stone, hospital for the . . . . 589
Stricture, Mr. Guthrie on . . . 118
Subclavian, case of ligature of the . 214
Syphilis, on the non-mercurial treatment of . . . . . . . 264

T.

Tetano-epileptic convulsious; curious case . . . . . . . . 449
Thackrah, Mr. on the blood . . 368
Tic douloureux, Mr. Scott on . . 97
Tic douloureux, progress, &c. of . . 98
Tic douloureux, species of . . . 99
Tic douloureux, causes of . . . 100
Tic douloureux, treatment of . . 101
Transfusion of blood, successful . . 230
Traumatic phlebitis, cases of . . 503
Truth, triumph of . . . . . 150
Tumors, malignant, Dr. Sims on . . 357
Tumors, Dr. Macfarlane's report on . 545
Tumors of the head and neck . . 545
Tumors, adipose and encysted . . 546
Tumors, malignant . . . . . 549
Tumors of the mamma . . . 551
Tumors, scirrhous and fungous . . 552
Turnbull, Dr. on aconitine . . . 434

U.

Umbilical cord, desiccation of the . 540
Ununited fracture, cured by friction,&c. 177
Ureters, on calculi in the . . . 312
Urethra, Mr. Guthrie on the . . 115
Urethra, length of . . . . 116
Urethra, structure of the . . . 118
Urethra, stricture of the . . . 119
Urethra, hæmorrhage from the . . 126
Urethra, calculi in the . . . . 316
Urinary calculus, Mr. Crosse on the . 307
Urinary calculus, chemical composition of the . . . . . . . 308
Urinary calculus, growth of . . . 309
Urine, operations for retention of . 128
Urine, Dr. Bostock on the pathology of the . . . . . . . 454
Urine, acqueous . . . . . 454
Urine, sub-aqueous . . . . 455
Urine, lithic . . . . . . 455
Urine, phosphatic . . . . . 457
Urine, purpuric . . . . . 457
Urine, albuminous . . . . . 458
Urine, saccharine . . . . . 459
Uterine hæmorrhage, Mr. Latham on . 150
Uterine inflammation; Dr. Churchill's cases . . . . . . . 481
Uterus, MM. Dupuytren, Boivin, and Dugés on polypi of . . . . 34
Uterus, Dr. Lee on the pathology of the 364
Uterus, inflammation of the . . 364
Uterus, fibrous tumors of the . . 366

V.

Varices of vagina, ruptured in labour, 224
Varicose tumor of scalp . . . 212
Venereal ulcers of the rectum, Mr. H. J. Johnson on . . . . . 574
Venereal ulcers of the rectum, with condylomata . . . . . 575
Venereal ulcers of the rectum, of phagademic character . . . . 576
Venereal ulcers of the rectum, with ulceration of other mucous membranes . . . . . . 578
Veneral ulcers of the rectum, with various secondary symptoms . . 579
Vesalius, anecdotes of . . . 213

W.

Waite, Mr. on the gums . . . 474
Wardrop, Mr. his morbid anatomy of the eye . . . . . . 140
Williams, Dr. on the treatment of syphilis . . . . . . . 268

# CONTENTS

OF THE

# MEDICO-CHIRURGICAL REVIEW,

## No. XLIII. JANUARY 1, 1835.

[BEING No. III. OF A DECENNIAL SERIES.]

## REVIEWS.

I.

Dr. and Mr. GRIFFIN on Functional Affections of the Spinal Cord and Ganglionic Nerves . . . . . . . . . . 1

II.

Dr. COXE's Inquiry into the Claims of Dr. HARVEY to the Discovery of the Circulation 31

III.

M. DUPUYTREN and Mad. BOIVIN on Fibrous Tumors and Polypi of the Uterus . 34

IV.

Experiments and Observations on the Gastric Juice, and the Physiology of Digestion. By Dr. BEAUMONT . . . . . . . . 49

V.

Memoirs of the Life and Medical Opinions of Dr. Armstrong. By Dr. BOOTT. [Malaria and Marsh Fever.] . . . . . . . . 69

VI.

The Principles and Practice of Obstetricy. By Dr. BLUNDELL . . . 73

VII.

The Concours—Clinical Chair of Surgery, Paris.
1. Parallele entre La Taille, &c. BLANDIN . . . .
2. Des Hæmorrhoides, &c. LEPELLETIER . . . . 79
3. Obliteration des Arteres. LISFRANC . . . .

VIII.

Mr. SCOTT on Tic Douloureux and Neuralgia . . . . . 97

IX.

MR. GUTHRIE on the Anatomy and Diseases of the Neck of the Bladder, &c. . 107

X.

Dr. QUAIN's Elements of Anatomy . . . . . . . 137

XI.

Mr. WARDROP's Morbid Anatomy of the Human Eye . . . . 140

XII.

Mr. MAYO's Introductory Lecture to the Medical Classes in King's College, London 141

# PERISCOPE.

## PART I.

## SPIRIT OF THE ENGLISH PERIODICALS, AND NOTICES OF ENGLISH MEDICAL LITERATURE.

1. Practical Hints on the Treatment of several Diseases. By Dr. Peacock . 145
1. Extensive Sloughing—2. Gangrene—3. Diabetes—4. Dropsy—5. Neuralgia —6. Pain from Exhaustion—7. Anomalous Cases—8. Obstinate Constipation.
2. Mr. Latham on Uterine Hæmorrhage . . . . . . 150
3. Dr. De Mey on the Triumph of Truth and good Sense . . . . 150
4. Dr. Leese's Treatise on Gout . . . . . . 151
5. Dr. Roberts on Hemiplegia in Pregnancy . . . . 152
6. Dr. Stroud's Case of Carditis—or Cephalitis . . . 153
7. Endemic Dysentery in the Edinburgh Workhouse . . . . 154
8. Pseudo-pneumonia—Dr. Hamilton on . . . . . . 155
9. Dr. Hawthorne on Cholera . . . . . . 156
10. Professor Beatty on "Frottement" observed in Peritonitis . . 160
11. Sir Charles Bell—the mighty Dead . . . 161
12. Dr. M'Dowel on Erysipelas . . . . . . 162
13. On Gastric Neuralgia. By the Senior Editor . . . . 166
14. Crepitatio Musculorum. By Dr. Johnson . . . . . 168
15. Plurality of Assistants in Hospitals . . . . 168
16. Anatomico-pathological Researches on the Pneumogastric Nerves . . 170
17. Mr. Poole on the Pathology of Tubercular Phthisis . 171
18. Phlegmasia Cærulea Dolens . . . . . . 173
19. Dr. Montgomery on Transverse Malposition . . . . 173
20. Incipient Phthisis cured—Dr. Forsyth . . . . . . 177
21. Dr. Parrish on Ununited Fracture cured by Pressure . . . . 177
22. Dr. Huston on Hypertrophy of the Mammæ . . . . 179
23. Mr. Pettigrew's Clinical Lecture on Hydrophobia . . . . 180
24. Dr. Thorburne's Proposal to dislocate the Head of the Femur in Morbus Coxarius, 183
25. Dr. Campbell's Case of Pendulous Tumors growing from the Ear . . 186
26. Occlusion of the Ductus Communis Choledochus . . 187
27. Prevalence of Calculous Complaints in India . . . . . 187
28. Dr. Edwards on the different Races of Mankind, . . . . 189

## PART II.

## SPIRIT OF THE FOREIGN PERIODICALS.

29. On the Employment of large Doses of Antimony after severe Wounds, &c. . 193
30. Wretched State of Midwifery in Germany . . . . . 193
31. The Virtues of Sarsaparilla appreciated in Germany . . . . 194
32. Character of Continental Medical Literature . . . . . 194
33. Lithotomy in Italy . . . . . . . . . 196
34. Operations of Lithotomy and Lithotrity—in illustration of M. Blandin's Memoir, reviewed in this number . . . . . . . 197
35. On Hæmorrhoids and Prolapsus of the Rectum . . . . 204
36. On Cutaneous Diseases. By M. Gibert . . . . . . 206
37. Endermic Use of Digitalis in Dropsy . . . . . . 207
38. Strictures on the Broussaian Method of investigating Diseases . . . 209
39. New Preparation of Quinine—Hydro-ferro-cyanate . . . . 211
40. Varicose Tumor on the Scalp . . . . . 212

41. Blue Serum from a blistered Surface . . . . 213
42. Anecdote of Vesalius . . . . . . . 213
43. Ligature of the Subclavian Artery . . . . . 214
44. On Fractures of the Carpal Extremity of the Radius . . . . 216
45. Pathological Anatomy of the Pneumo-gastric Nerves . . . . 218
46. Anatomy of the Lymphatic System . . . . . 220
47. Melanosis of the Eye-ball . . . . . . . . 221
48. Phrenology, human and comparative . . . . . . 221
49. Detection of Miasmata in the Air. M. Bousingault . . . . 223
50. Rupture of Varices of the Vagina during Labour . . . . 224
51. Dr. Bellingheri on Facial Neuralgia . . . . . . 225
52. Professor Albers on Inflammation of the Spinal Dura Mater . . . 227
53. Singular Case of Epileptic Hysteria . . . . . . 229
54. Neuralgia of the Leg and Foot—Excision of Nerve . . . . 229
55. Two Cases of Successful Transfusion of blood in Hæmorrhage . . 230
56. Bouillaud's Refutation of Majendie's Theory of the Heart's Sound . . 231
57. Secale Cornutum as an Emmenagogue . . . . . . 233

## PART III.

## CLINICAL REVIEW AND HOSPITAL REPORTS.

### St. George's Hospital.

58. Abstract of a Lecture on Injuries of the Nerves, delivered by Cæsar Hawkins, Esq 234

### Charing-Cross Hospital.

59. Surgical Report.
  A. Fractured Ribs—Laceration of the Hand and Arm . . . . 241
  B. Fractured Ribs . . . . . . . . . 241
  C. Fractured Femur—no Union—Death . . . . 242
  D. Compound Fracture of the Tibia and Fibula—Death, . . 243
  E. Removal of a Steatomatous Tumor . . . . . . 243

### St. Thomas's Hospital.

60. Dr. Root's Case of Neuralgia . . . . . . . 244

### Manchester Royal Infirmary.

61. A. Chorea . . . . . . . . . . 246
  B. Jaundice . . . . . . . . . 248
  C. Rheumatism . . . . . . . . 251
  D. Amenorrhœa . . . . . . . . 254

### New Westminster Hospital.

62. M. Guthrie's Clinical Lecture . . . . . . . 256

### Pennsylvania Hospital.

63. A. Injuries of the Head . . . . . . . . 259
  B. Case of Phlebitis after Operation for Varicose Veins . . . . 264

### St. Thomas's Hospital.—(*bis.*)

64. On the Treatment of Syphilis without Mercury . . . . . 264

## MISCELLANIES.

65. Case of Hepatized Spleen. By James Edward, Surgeon, of Forfar . . 272
66. Medical Education and Organization . . . . . . 272
Bibliographical Record . . . . . . . . . 278

## EXTRA-LIMITES.

The Baths of Pfeffers in the Grison Country. By James Johnson, M.D. . 281
Singular romantic situation of the Bath-House . . . . 282
Gorge of the Tamina—frightful cavern . . . . . 284
Source of the Thermal Waters in the Cavern . . . . . 286
A German Table D'Hôte . . . . . . . . 291
The Waters of Pfeffers, and the singular Mode of using them . . 299
Remarks on Thermal Waters and Warm Bathing in various Complaints . 300

## INTELLIGENCE, CORRESPONDENCE, &c.

We have received a letter from Germany, impugning certain statements made by Dr Hoskins, and copied by us from the Lancet of July 29th last. The passage will be found in page 487 of our October number. The letter contains the following averments :—

"I was sorry to see an extract from page 814 of the Lancet for the 25th of August last, copied into the last number of your Journal, purporting to be a clinical lecture of Mr. Wardrop's, in which he quotes Dr. Hoskins' extraordinary successful treatment of cholera in the Guernsey Hospital by solutions of salt. Now, Sir, from what this gentleman's conviction of the superior efficacy of that remedy arose I cannot divine, but positively assert that he had nothing directly or indirectly to do with the Cholera Hospital, and that *no cases were ever treated there* by *salt and water alone*. I have often observed that numerical details are brought forward in support of fictitious cases casting a shade of reality over them. If Dr. H. has at any time stood by the bed-side of 62 cholera patients in *the third stage* of *cholera*, and *cured* or *witnessed the cure* of 46 *of them, by salt and water alone*, I fearlessly assure you that such cures with such means were never made in this island,—in support of what I here advance, I beg to refer you to the members of the late Board of Health :—My only object in trespassing on your valuable time is to prevent any of your numerous readers from being misled by such egregious perversion of facts as the extract from Dr. H.'s letter contains. I have the honour to be, Sir, your humble servant, ———."

It is incumbent on Dr. H., we think, to adduce testimonials from eye-witnesses to rebut this statement.

The review of Andral's work has been received, but we are unable to appropriate it, as the work itself was previously in the hands of one of our own reviewers. We have lost the address of the writer: but the paper is left with our publisher, 32, Fleet Street.

## TIEDMANN'S PHYSIOLOGY.

We have received the first volume of Tiedemann's "Systematic Treatise on Comparative Physiology introductory to the Physiology of Man," translated from the German by Drs. Gully and Hunter Lane; and we have no hesitation in saying that it is one of the most interesting volumes which we have ever perused. Although it is the *first* volume, and the only one yet published by the distinguished author himself it forms, nevertheless, a complete system of *comparative* physiology in itself—being introductory to human physiology, which may or may not follow from the same pen. The work is quite incapable of analysis, but we recommend it to the perusal of our readers in the most strenuous and sincere manner.

In the press and speedily will be published, and (by permission) dedicated to Sir Henry Halford, Bart. &c. &c. &c. "A Practical Compendium of the Diseases of the Skin, including a particular Consideration of the most intractable and of those considered Syphilitic;" by Jonathan Green, M.D., Member of the Royal College of Surgeons, and formerly Surgeon in his Majesty's Royal Navy.

Dr. Bostock's Plan of Medical Reform has come to hand; but it has been published in the weekly periodicals, we have delayed its insertion for the present. The tumult of political affairs, and the struggles between conservatives and reformers, will, we fear, arrest for a time the progress of Medical reform. We shall wait and watch.

Many other Notices aud Answers to Queries we are obliged to omit till next Number.

N.B.—The Index (price 3*s.*) to the first 20 Volumes of the New Series is published. Only a limited Number were printed, and they will soon be out of print.

# CONTENTS

OF THE

# MEDICO-CHIRURGICAL REVIEW,

## No. XLIV. APRIL 1, 1835.

[BEING No. IV. OF A DECENNIAL SERIES.]

---

## REVIEWS.

I.

Treatise on the Formation, Constituents, and Extraction of the Urinary Calculus, &c. &c. By J. G. Crosse, Esq. . . . . . . 305

II.

Medico-Chirurgical Transactions, Vol. XVIII.
1. On Irritation of the Spinal Cord and its Nerves, in connexion with Disease of the Kidneys. By Ed. Stanley, Esq. . . . . . . 353
II. On Malignant Tumors connected with the Heart and Lungs. By John Sims, M. D. . . . . . . . . . 357

III.

Sciential Medicine—a New System of Philosophy. By Thomas Eden, M.R.C.S. 362

IV.

Pathology of the Uterus and its Appendages. By Robert Lee, M.D. . . 364

V.

An Inquiry into the Nature and Properties of the Blood in Health and Disease. By the late C. T. Thackrah—(New Edition) . . . . . 368

VI.

Anatomical Description of the Parts concerned in Inguinal and Femoral Hernia. Translated from the French of M. Jules Cloquet . . . . 382

VII.

Clinique Medicale, &c. By M. Andral, of La Charite . . . . 398

VIII.

The Philosophy of Health; or, an Exposition of the Physical and Mental Constitution of Man, &c. By Southwood Smith, M.D. . . . . 421

IX.

On Dysentery, its Forms and Consequences. By James Annesley, Esq. . 425

X.

Transactions of the Medico-Chirurgical Society of Edinburgh . . . 429
I. Hemicrania . . . . . . . . 430
II. Inflammation of the Orbital Lining . . . . . 430
III. Cases of Hydrocephalus . . . . . . . 430
IV. Formation of Hydatids . . . . . . . 431
V. Rupture of Biceps Flexor Cubiti . . . . . 432

VI. Influenza in Edinburgh . . . . . . 432
VII. Epidemic Scarlatina in Edinburgh . . . . 433

XI.

On the Preparation and Medicinal Employment of Aconitine. By Dr. Turnbull 434

XII.

Outlines of Botany. By Professor Burnett, F.L.S. . . . . 436

XIII.

A Treatise on Insanity, and other Disorders of the Mind. By J. C. Prichard, M.D. 442

## PERISCOPE.

### Part I.

### SPIRIT OF THE ENGLISH PERIODICALS, AND NOTICES OF ENGLISH MEDICAL LITERATURE.

1. Extraordinary Case of Tetano-Epileptic Convulsions, with the Post-mortem Examination, &c. By James Johnson, M.D. . . . . . 449
2. Acute Nephritis. By M. Le Moine . . . . . . . 452
3. Pathology of the Urine. By Dr. Bostock . . . . . 454
4. A peculiar Affection of the Lungs of Infants. By M. Joerg . . . 460
5. On the Connexion between Acute and Chronic Rheumatism. By Dr. J. Johnson 460
6. Remarkable Case of Diseased Heart. By Dr. Seymour . . 461
7. Poisoning by Arsenic . . . . . . . . 463
8. On the Signs of Pregnancy. By Dr. Ingleby . . . 468
9. The Gums, their Diseases and Sympathies. By Mr. Waite . . . 474
10. Irrenaulstadt—a German Lunatic Asylum on the Rhine . . . 476
11. Medical Problems. By Dr. Griffin.—Remarkable case of Enteritis . . 477
12. Dr. Mateer on the Injurious Effects of Salt . . . . . 480
13. Dr. Churchill's Cases of Uterine Inflammation . . . . 481
14. Practical Observations on Cholera. By Mr. Henry George . . . 483
15. On Renal Diseases. By the Editor . . . . . . . 484
16. Dentology
    1. Mr. Bell on the Teeth . . . . . . 487
    2. Mr. Brown's Dentologia . . . . . . 488
17. Mr. Liston on Diseases of the Rectum . . . 489
18. On Endermic Medication. By Dr. Sigmond . . . . 492
19. Dr. M'Cormac on Fever . . . . . 496

### Part II.

### SPIRIT OF THE FOREIGN PERIODICALS.

20. State of Medical Opinion in Paris . . . . . . 497
21. Purulent Alteration of the Blood . . . . . . 500
22. Traumatic Phlebitis . . . . . . . . . 503
23. On the Nature and Treatment of Acute Rheumatism. By Dr. Barthelemy (of Paris) 505
24. On the Acarus Scabiei. By Messrs. Blainville and Dumerill . . 507
25. Medical Statistics of Algiers . . . . . . . . 509
26. On the Treatment of Amenorrhœa by Irritation of the Mamma . . 511
27. On the Treatment of Erectile Tumors by means of Caustic . . . 512

28. Partial Ossification of Muscles 514
29. Poisining by Oxymur. Hydrarg 515
30. Some Subjects of Medical Jurisprudence 518
    1. Death from Hanging 518
    2. Difficulty of ascertaining the Cause of Death in some Cases 519
31. Monomania, inducing to murder 520
32. Detection of Poison Twelve Months after Death 521
33. Detection of same Seven Years after Death 523
34. Impotence—Affiliation 523
35. On Epidemics 524
36. The Chloruret of Lime as a Disinfecting Agent 526
37. Suspected Infanticide (Consultation) 527
38. Poisoning by Belladonna 528
39. Laceration of the Diaphragm, with several Cases 529
40. Appeal of the Parisian Surgeons respecting Hospital Appointments 533
41. Souvenir du Cholera! a satirical Poem, entitled "Nemesis Médicale!!" 535
42. On the Responsibility of Medical Men 536
43. Fees of Medical Men—a Legal Claim in France 538
44. On the Desiccation of the Umbilical Cord 540
45. Exfoliation of the Epidermis in Infants 541
46. Memoranda respecting Cataract 542
47. Medical Superstitions in some Parts of France 543
48. Rhinoplastic Operation, by Dieffenbach, at La Pitié 544

## PART III.

## CLINICAL REVIEW AND HOSPITAL REPORTS.

### GLASGOW ROYAL INFIRMARY.

49. Report on Tumors. By Dr. M'Farlane 545
    1. Tumors of the Head and Neck, with numerous Cases 546
    2. On Tumors of the Mamma, with Cases and Comments 551

### ST. GEORGE'S HOSPITAL.

50. Remarkable Distortion of the Cervical Vertebræ, with Clinical Remarks. By Cæsar Hawkins, Esq. 557

### LIVERPOOL OPHTHALMIC INFIRMARY.

51. Report of the Practice for the Year 1834. By Mr. Neill 559
    1. Amaurosis 560
    2. Cataract 562
    3. Contusions and Wounds of the Eye 562
    4. Pustules of the Cornea 563
    5. Strumous Corneitis 563
    6. Fistula Lachrymalis 564
52. Sir B. Brodie's Lecture on Hæmorrhoids 564
    Prolapsus of the Rectum 571
    Excrescences of the Rectum 573
53. Remarks on Ulceration of the Rectum, occurring in connexion with Venereal Secondary symptoms. By H. J. Johnson, Esq. 574
    1. Ulceration of the Rectum in connexion with Condyloma 575
    2. Phagedænic Ulceration of the Rectum 576

3. Ulceration of the Rectum, with Ulceration of other Mucous Membranes 578
4. Ulcers of the Rectum accompanying various Secondary Symptoms . 579

## MISCELLANIES.

54. Birmingham School of Medicine . . . . . . . 581
55. Population Returns . . . . . . . . . 582
56. Dr. Graves' Introductory Lecture to a Course of Physiology and Pathology 583
57. Signs of the Times—Death, the Great Leveller . . . . 585
58. Why are we Right-handed? . . . . . . . 587
59. Anatomy Bill . . . . . . . . . 588
60. Hospital for Stone . . . . . . . . 589
61. Bibliological Record . . . . . . . 591

## EXTRA-LIMITES.

62. Messrs. French and Dodd on Cholera . . . . . . . 593
63. Horne's Acetum Opii Sedativus . . . . . . 594
64. Advantages of Medical Societies . . . . . . 595
65. New School of Anatomy . . . . . . . 596

## INTELLIGENCE, CORRESPONDENCE, &c.

### ST. GEORGE'S HOSPITAL—NEW SCHOOL OF ANATOMY,

*Kinnerton Street, Knightsbridge, immediately adjoining St. George's Hospital.*

This splendid Building, with its extensive public and private Dissecting Rooms, will be opened for the purpose of Anatomical Instruction, on the 1st of October, 1835. Every possible arrangement has been made for securing the health and comfort of the Student.

The Lectures on Anatomy will be delivered by Mr. Tatum, and Mr. Henry James Johnson; the Demonstrations by the latter Gentleman, and Mr. Henry Charles Johnson.

Guernsey, March 16th, 1835.

Gentlemen,

In reply to an anonymous communication in your last Number I shall merely observe, that "the numerical details" which "cast a shade of reality" over the cases treated by salt and water, in our Cholera Hospital, are derived from the Register kept by the House Surgeon, under the direction of the late Board of Health; which document was placed at my disposal, during the prevalence of the disease, by a member of the very Board referred to by your Correspondent.

I am, Gentlemen,

Your obedient Servant,

S. E. HOSKINS.

*To the Editors of the Med. Chir. Review.*

We are glad to perceive that Dr. John Hamett, the talented author of the statistical and practical Work on Epidemic cholera, has been honoured with the Fellowship of the Royal Society—a distinction conferred on him, we understand without a single dissentient voice.

*In the Press,*

A Clinical Account of Fever, Gout, Rheumatism, &c. and various Diseases of the Chest. By Dr. Aldis, Cantab. Member of the Royal College of Physicians, London.

THE

# Medico-Chirurgical Review,

## No. XLIII.

[NO. 3 OF A DECENNIAL SERIES.]

OCTOBER 1, 1834, TO JANUARY 1, 1835.

---

### OBSERVATIONS ON THE FUNCTIONAL AFFECTIONS OF THE SPINAL CORD AND GANGLIONIC NERVES, IN WHICH THEIR IDENTITY WITH SYMPATHETIC, NERVOUS, AND SIMULATED DISEASES IS ILLUSTRATED. By *W. Griffin*, M.D. and *Daniel Griffin*, Esq., M.R.C.S. London, 8vo. pp. 247. 1834.

WHEN we observed that one hundred and seventeen—or rather 148 *cases* were narrated in one small volume, it reminded us of the title of one of Sir Richard Phillips' books—a "MILLION OF FACTS." The impression however, was not unfavourable, for, as our readers know, we are not among those who deride facts or cases, and pride themselves on the facility with which they can form theories and generalize, without the trouble of *particularizing*. In an investigation like the present, too, where so much intricacy, difficulty, and doubt exist, there needs no apology for accumulation of facts, however tedious or minute. The authors of this volume are entitled to the meed of great industry, at least, and we hope to show that they merit much more than this. We shall proceed to the work of analysis, since we foresee a tolerable lot of labor in the task.

A long preface opens with encomia on Mr. Abernethy, the preceptor of Dr. Griffin, and with an opinion that, had that eccentric surgeon lived at a somewhat later period in the advance of physiological and pathological science, he would have attributed to irritation of the brain and spinal cord those functional affections which he attributes to "constitutional disorder," "nervous irritation," &c. Now that Legallois and others have shewn that different portions of the medulla spinalis form centres, from which nervous actions of corresponding parts proceed, and to which they tend, much knowledge is likely to accumulate by strict observation of morbid phenomena. Had Mr. A. (our authors remark) gone a little farther than he did, and acknowledged "that not only disorder of the digestive organs, but of the brain, lungs, or uterus, was capable of affecting the spinal cord (and thus producing sympathetic disorders of the body and limbs, without operating through the medium of the brain,) he would have anticipated all that we could offer on the subject."

"The sensitive portion of the spinal cord and medulla oblongata seems obviously the medium by which derangement of the digestive or other organs act in exciting constitutional irritation, that is, act on the mind, on the vascular or secreting systems, or on the motor functions of distant parts; and again, it is the medium by which distant local irritation, or the passions or affections of the mind, influence the digestive organs. To this reciprocal action and reaction Mr. Abernethy's doctrine is continually directed. For the most part, however, he overlooked the circumstance, that the spinal marrow is not always a mere inert nervous conductor between the source of disturbance and the distant affections indicative of constitutional irritation, but is itself the part absolutely and immediately thrown into a morbid state, of which these affections are but the symptoms; thus, when in disordered states of uterus or stomach, females of hysterical habits complain of pain of chest, cough, oppression, palpitation, and debility, these are not always to be looked upon as sympathetic complaints, occasioned we know not how by the uterine or gastric disturbance, but as signs of a morbid state of some portion of the spinal cord; of a secondary disease, in short, induced by the disturbance. It is the more necessary to hold this in view, as the morbid state or irritation of which we speak may sometimes occur apparently as a primary affection, or may remain as the sole disorder, when that which originated it has been long removed.—*Pref.* vii.

Our authors need not have apologized for using the term "irritation." It may not be so capable of definition as "inflammation," but it is just as necessary; and serves sufficiently well to convey ideas, which is all we want of terms and words in general.

"Though the relations of many parts of the system are still so mysterious, and the sympathies so complete and extraordinary as to defy all explanation by nervous communication, much may in this way be understood, especially of the spinal cord and its connexions. Its physiology has been so very much elucidated by late experiments, that a little consideration would suggest to us the complaints likely to be produced by affections of any individual portion of it. From its continuity with the brain (that part to which intellectual actions have been assigned), and their known reciprocal sympathies, we should expect its diseases would excite many symptomatic disorders of that organ, as pain, vertigo, delirium, &c., which we shall find not uncommon. As the origin of all sensation and motion, we might anticipate simply painful, or spasmodic, or paralytic affections in any part of the body, or that general loss of feeling and motion in which we sometimes see persons lie, inanimate and powerless; the body still, the eyes fixed, the functions of respiration carried on imperceptibly, yet fully sensible of all that is going on around them. As it includes the origin of the fifth pair, which is found to be essentially necessary to every organ of sense, except sight, in the exercise of its functions, and even to sight to be accessory, irritation or disease near the trunks of that nerve should induce disturbance of the functions of the senses, or temporary paralysis of all or any of them, or painful affections of the extremities of these nerves themselves, as in the orbital, or facial, or alveolar branches. As the seat of the respiratory functions, we should be inclined to attribute to its disorder many complaints of the respiratory system. Near to the origin of the fifth are the roots of the respiratory nerves, the glosso-pharyngeal, the eighth pair, the spinal accessory, the phrenic; derangement or irritation of which should occasion affections of the throat, respiratory muscles, lungs, diaphragm, and stomach; loss or change of voice, hoarseness; crowing, croupy, or wheezing respiration; barking, cough, globus hystericus, spasms of the chest or stomach, difficult deglutition, hiccough, weeping, crying, laughing, &c. Irritation at the root of the cervical nerves might induce, by communication, any of the foregoing symptoms, or occasion pain, stiffness, rigidity, or spasm of the muscles of the neck or arm, or numbness or paralysis. To irritation at the origin of the dorsal nerves we might attribute oppression, palpitation, pain in the anterior of the chest or stomach, or sides; and, at the origin of the lumbar nerves, abdominal tenderness, colic, constipation, pains in the loins, hips, extremities, with disorder or paralysis of the bladder, or of the lower limbs.

Lastly, the whole of the medulla spinalis, including the origin of the eighth pair, goes to form the ganglionic system of nerves. These supply all the muscles of involuntary motion, and all the viscera; and we have reason to suppose are mainly concerned in the secreting processes, among which Dr. Wilson Philip places the disengagement of caloric. They are distributed in networks round the arteries, perhaps solely supplying them with nervous power, and rendering them like the heart, though independent of, yet liable to be influenced by, any considerable portion of the brain or spinal marrow. In irritations of the whole or a great portion of it, therefore, we should anticipate irregular action of the heart, evinced in palpitations or in approaches to a suspension of all action, and syncope; interruption of the secretions, evinced in the oppressed breathing, failure of appetite, and flushings or burning heats, or universal shiverings, or coldness of the extremities or of particular members; and irregularities of the circulation, evinced in local, and often violent, determinations, or in loss of tone and vascular debility. How accurately these conjectures are borne out by subsequent cases, the reader will have an opportunity of considering." xi.

We are convinced, with our authors, that the present inquiry into spinal diseases will impress us with the necessity of examining more attentively the real dependence and value of symptoms. How ready are we, they justly observe, when the stomach is affected with pain, vomiting, and tenderness on pressure, "to conclude that there exists an acute or a sub-acute inflammatory state of some portion of that organ, when, on a moment's reflection, we must admit that all these symptoms depend solely on the nerves, and may exist with or without inflammation—that, independent of the nerves, the stomach could neither have pain, tenderness, nor vomiting at all." The Broussaian doctrine could never spread so far and wide, if due consideration had been given to this subject, and if men had accurately observed how closely gastralgia will imitate gastritis, and irritation inflammation. Morbid anatomy is daily leading astray many thousands of our brethren, by inducing them to mistake effects for causes. Thus every tint of colour observed in the stomach after death, has been put down to the account of inflammation, although these appearances are often wanting in genuine inflammation, and existing where no such disease could even be suspected. Dr. Yellowly's paper on the vascular appearances of the stomach, has been too little attended to by the Broussaians. One would suppose from the writings of this school, that inflammation of the mucous membrane of the stomach was far more common than catarrh or bronchitis; yet such is not the case. The stomach being destined to receive an infinite variety of the most heterogenous ingredients, Nature has wisely endued it with much less proneness to inflammation than almost any tissue in the body—and hence the abuse, which it daily and hourly sustains, from the excesses of the epicure and the drunkard, seldom wholly destroys its natural action, excites inflammation, or leads to organic disease. But we must proceed to the more immediate matter of the volume.

### CHAP. 1.—INTRODUCTORY OBSERVATIONS.

Functional affections of the spinal cord are the chief subjects of this introductory chapter. The singular, and apparently functional disorders which assume the garb of all others, and continue unrelieved by the remedies applicable to any which resemble inflammations, yet are exasperated by bleeding—which simulate spasm, yet defy opiates—and which sometimes eventually disappear of their own accord—are not a little puzzling, and are well entitled to attention. It appears reasonable to our authors, and to us, that some advantages may result from the attempt to trace nervous affections to one or more of the three great nervous centres; the brain, the spinal marrow, and the ganglionic system. All these systems are subject, independently of one another, to inflammation, to irritation, and the influence of sedative powers. The spinal cord itself consists of portions possessed of separate powers and functions—in other words, presents several centres from whence nervous energy is distributed to different parts of the body. Thus four of the senses derive their faculties from the superior portion of the medulla spinalis, including the medulla oblongata—independently of the brain or cerebellum. Its anterior part is the source of voluntary motion —its posterior, of common sensation. Between these is Sir C. Bell's column, which gives out the respiratory system of nerves. These considerations must lead us to question the propriety of attributing all nervous diseases to affections of the brain. There can be no doubt that a large proportion of these are attributable to irritation of the spinal nerves at their origins.

The authors do not pretend that their investigation into the nature of these irritations has led them to a successful practice;—yet surely if we ever hope to attain any thing like certainty in therapeutics, it must be through the medium of accurate symptomatology and pathology. We shall commence by laying before our readers an abstract of an extraordinary case, the first in the book, and the one which first directed the attention of the authors to the subject of spinal irritation.

*Case* 1. "A young lady, aged twenty-one, who had always before enjoyed good health, received a slight blow on the chest from her mother, during her convulsive struggles while dying of apoplexy. She spit up a little blood at the time, and felt pain for some days: after this it suddenly moved to the abdomen; affecting the left side, about the situation of the descending colon, and was accompanied by frequent pulse, tenderness, and the most incessant vomiting. The pain was abated by bleeding, blistering, and aperients; but nothing could allay the vomiting, which was brought on by the smallest quantity of any thing, solid or liquid, taken into the stomach. This came to be attended with flitting pains in the head, with throbbing of the temples, and intolerance of light, attributed to the straining; the continuance of which made it difficult to move the bowels. Even when medicine did operate, it gave no relief.

She remained many days in this state, suffering much from want of rest and the distressing retching; after which she was attacked with frequent oppression, occurring at intervals through the day, and usually terminating in fits of insensibility. In these she usually lay for ten or fifteen minutes, with her hands fast clenched, or sometimes shutting and opening them alternately with great rapidity. There was considerable rigidity of the tendons of the wrist, while the fit lasted; and the first symptom of amendment was always a gradual relaxation and opening of the fingers, when she fetched a long deep sigh, and recovered." 7.

These oppressions proved as intractable as the vomiting. Repeated blisters, bleedings, and exhibitions of half the Materia Medica produced no relief, or only the most temporary. After a few weeks, however, the more distressing symptoms began to give way independent of medicine, while the digestive organs improved in function by light bitters and aperients. She recovered so far as to be able to go out to parties and amusements.

This reprieve was only temporary; the oppression and cough returned, with pain in the left side. The cough was dry, loud, and convulsive, becoming, at last, incessant. "The convulsive expirations followed one another with such rapidity, that one could only conceive the suffering by imagining the fits of a severe chincough following one another without interval." The attempts to relieve the complaint were unavailing. At length the right lobe of the liver became enlarged, and formed a round, painful, and circumscribed tumor, resembling a large abscess. Mercury was prescribed, and copious ptyalism induced. The cough was now relieved, and in a week or two ceased. As the soreness of the gums diminished, the cough returned with all its terrors. New symptoms displayed themselves, every week, or alternated with the old. Among other distressing symptoms, she was seized with severe pain and tenderness in the hypogastrium, followed by retention of urine requiring the catheter. There was scarcely any urine secreted for three or four days. During all this time the hard dry cough was incessant.

"The case was now looked upon as quite hopeless : the distress occasioned by such complicated disorder destroyed all rest and appetite, and induced extreme emaciation ; solid food could no longer be borne, but was either instantly rejected or excited violent spasmodic pain in the stomach, and sometimes the oppressions. The slightest motion (she was now continually confined to bed), brought on similar paroxysms, after which she usually became almost insensible, with suppressed convulsive efforts at coughing, her voice gone, and her pulse rapid. This state generally lasted for some hours, sometimes much longer: and, as strength gradually returned, the hacking eternal cough resumed its attack." 10.

It would be endless to enumerate all the phenomena which this unhappy lady presented. The disease successively imitated organic affection of the lungs, heart, and abdominal viscera. She lived almost entirely on milk, with a small quantity of fruit occasionally. Medicine was discontinued, as being thought useless. At the close of the year 1828, the spine was examined for the first time. There was no deformity, unevenness, or prominence of any vertebræ; but extreme tenderness of the whole column. Pressure on any of the spinous processes excited instant convulsive fits of coughing, with pain at the corresponding point anteriorly, or else oppression. The slightest curvature of the spine, in any direction, was intensely painful. "It seemed extraordinary how little the patient directed attention to the back in so intense a case of spinal disease." The complaint was now considered as clearly dependent on affection of the medulla spinalis, and all its various phenomena explicable on that ground. The extreme weakness, emaciation, and inability to turn in bed, prevented the application of blisters, and Nature was left to her own efforts. The complaint, however, increased—the whole spinal column became still more tender—all the phenomena exasperated in intensity. An issue was inserted on each side of the second cervical vertebra; by which the pain of the forehead, face, and scalp was considerably relieved; the other symptoms remaining *in statu quo.* At the end of February, 1829—

"While drinking in the evening, she felt a sensation as if something gave way in her chest, as if the band from the upper part of the sternum, before spoken of, had snapped. She was instantly attacked with oppression, a sense of burning and pain in the throat and chest, croupy breathing, total loss of speech, and blindness of the left eye, with numbness and paralysis of the left arm; she had also a sense of numbness extending from the point in the chest where she felt the band snap, across to the shoulder, and down the left arm to the fingers; some difficulty of swallowing, and violent pain, straining, or retching, when the smallest quantity of food or drink reached the stomach. There was some swelling and excessive tenderness of stomach, with violent cramp at intervals, which extended down to the limbs and knees. The secretion of urine was suppressed, no more than half an ounce having passed in twenty-four hours, and that thick and black. There was no tenderness or fulness in the pubic region.

After the lapse of some days, during which croton oil and diuretics had been freely used, the eye partly recovered its power, and the action of the kidneys was restored. Blisters to the throat and neck were of little advantage; but, on applying one to the occiput, some degree of voice was manifestly recovered, and the power of swallowing perfectly; the fingers of the paralyzed arm also seemed to acquire a little motion.* In July, a very decided improvement had taken place. The arm had attained much strength; and she was able to speak in a low whisper, though with pain and difficulty. It should be observed, that the power of articulating was never lost, so that, even while partly dumb, she could often make herself understood by a distinct, voiceless articulation of the words." 14.

At the period of publication, this poor young lady was gradually improving in health, and entertained sanguine hopes of her own recovery. The phenomena detailed in the last quotation are mysterious, not to say inexplicable. It appears that "she now feels a sore tumor as if growing from the spine, and hitting against the sternum every time she coughs." We fear there is great mischief lurking behind yet; and wish that we may be mistaken. The sequel of the case, whether fortunate or fatal, will be very interesting. The case bears a close resemblance to one related by Dr. Monteith in Dr. Abercrombie's work, and a reputed similar one is next detailed by the authors themselves. We shall very briefly notice it here.

*Case* 2. A married lady, aged 45, was seized with acute pain and great tenderness in the ascending colon, with constipation, thirst, heat of skin, quick pulse, and vomiting. Bleeding, aperients, and blisters gave much relief—but the sickness of stomach continued incessant. The remission of the other symptoms lasted only two or three days, when they all recurred. The pain now extended to the transverse arch of the colon, with much pyrexia. Relief again was obtained by depletion. A third attack occurred, the sigmoid flexure of the colon being the chief seat of complaint. Depletion a third time. After several weeks of great suffering, there was found a hardness, or even enlargement of the liver; the evacuations being scanty and black. Mercury was now prescribed, and copious ptyalism, induced, "followed by a slow but progressive amendment." She eventually attained a tolerable state of health.

---

* "The paralytic attack seemed in the first instance to have affected the whole side; for although she never complained of the left leg, it was observed, in those convulsive thrillings of the frame which succeeded paroxysms of the pain and oppression, to remain perfectly still. It continued, however capable of the usual voluntary motions."

We have fairly abridged this case, and confess our inability to discover any very strong proofs of spinal disease in it. The authors themselves, indeed, do not appear to have suspected any such origin, till some time afterwards, when, on an attack "of violent spasmodic pain of stomach, followed by sickness, and violent pain in the back," the reporters examined the spine, and found "extreme tenderness of all the lumbar vertebræ, with a slight degree at the seventh dorsal." Our authors remark that the patient, unfortunately seldom complains of the back, in such cases, and hence the real nature of the malady is too often overlooked. In the following sentiment we agree with the authors.

> "It should never be forgotten, that all affections at the sources of nervous power, or origins of nerves, are indicated by pain or disturbed action at the minute and distant extremities; and that this must hold true with respect to the brain and cord, as well as with any of the great nervous trunks in which the phenomenon is more frequently observed." 19.

*Case* 3. Bridget Leary, aged 22, complained of constant and distressing head-aches, with oppression and shrill piping noise in breathing—pains in all her joints—at the pit of the stomach—in the sides, hips, and limbs. These pains were aggravated by motion, and alleviated by the recumbent posture. On examination, the whole spine was found acutely tender. Pressure at the first or second vertebra occasioned pain, which shot forward from the occiput to the brow;—a little lower, pain was excited at the larynx. On pressing one of the lower cervical vertebræ, the pain occurred at the point where the trachea dips behind the sternum. On pressing the upper dorsal, the pain was felt at the middle of the sternum—from the third or fourth dorsal to the eighth or ninth, it was excited at the ensiform cartilage—still lower, at the sides, and in the lumber vertebræ, the pain was excited in the iliac and pubic regions.

> "Pressure behind the trochanter produced pain at the crista of the ilium, at the inside of the thigh, and also in the sides, or in the opposite hip. On the thigh or knee, it excited pain in the shins and toes. The pain was more acute on pressing the first or second cervical, and seventh or eighth dorsal, than any others; which accounts for the headach and pain of stomach having been the most constant and distressing of all the symptoms.
>
> This is by no means either one of the most common or worst forms of spinal irritation. It may be of use, perhaps, to compare it with a case of chronic disease from injury, in which the analogy seems sufficiently strong to assist or influence our views of its nature." 30.

*Case* 4. William Collins, aged 50, was caught up by the wheel of some machinery, two years ago, whereby his shoulders, back, and neck were much crushed and injured. He had a slow and imperfect recovery, remaining paralytic of the upper extremities, with contraction of the fingers, and debility of the lower limbs. He had also pain and stiffness in the muscles of the neck—in the limbs and joints—"and crackling noise on motion, as in chronic rheumatism"—frequent pains in the head, chest, and abdomen.

Examination of the spine, which was universally tender, gave the following results.

"Pressure on the first or second cervical vertebra occasioned pain over the brow; on the second or third, above and about the larynx; on the lower cervical, the lower part of the trachea as it enters the chest, and also at the top of the shoulder and in front of the chest. Pressure on the upper dorsal occasioned it at the superior part of the thorax; on the seventh or eighth, at the ensiform cartilage; on the tenth or twelfth, at the umbilicus. On the upper lumbar, at the sides and pubic region; on the lower lumbar and sacrum, at the groins, hips, and thighs. Behind the trochanter, at the knee and ancle." 21.

When only one point of the cord is affected, the symptoms are proportionably simple, and are more apt to deceive the practitioner, by their resemblance to chronic local affections of a constitutional nature. The following case is an illustration.

*Case* 5. N. Neville, aged 22, complained of pain at the pit of the stomach, of two months' duration. She has slight cough, with general langour and debility—headach—pain and stiffness at the back of the neck—weak appetite, &c. There was tenderness at the seventh dorsal vertebra, where pressure excited pain in the stomach. There was no tenderness of the cervical vertebræ. She was perfectly cured in a few days, by purgatives—blisters on the spine—and acid tonic bitters. In another case, where there was pain at the lower part of the sternum, and slight cough for two months, the bowels being natural, and the general health tolerably good, there was extreme tenderness about the seventh and eighth dorsal vertebræ, where pressure occasioned a darting pain towards the sternum, as if the patient were pierced with a sword. Being a labouring man, he would not submit to blistering; but he was cured, though more slowly than the former patient, by purgatives. Another case is mentioned of a man who fell backwards on a stone and injured his spine, about the seventh dorsal vertebra. On application at the dispensary, it was found that pressure on the spine occasioned instant pain at the pit of the stomach. He was ordered purgatives and fomentations. He did not return at the time appointed; and on inquiry, it was found that he was so much relieved as to return to work. He dropped down suddenly and died.

They do not mean to deny that spinal tenderness is never a mere symptomatic affection. They take occasion to relate several cases where it was evidently symptomatic of intestinal, dental, or other irritation. "But even in many complaints of this kind, they observe, especially when existing for any length of time, the spinal affection becomes a serious and absolute disease, reacting on and increasing the disorder which gave it existence, or producing a new strain of symptoms proper to itself." In their early inquiries this was so frequently met with, especially in females, that they found it necessary to make a general examination of the patients attending the dispensary, in order to ascertain how far it was to be regarded as an independent affection. "The result shewed that it was very seldom wanting where those nervous symptoms supposed to indicate disorder of the spinal cord were present, and where there was no local disease to which it could be attributed—while, in almost every instance, in which acute or chronic local disease was found to exist, no such tenderness could be detected."

This is certainly strong ground for their doctrines to rest upon, if fairly and candidly stated—and we cannot question the truth of the statement.

> "The minute attention to the spine which these examinations induced, led to much more interesting inferences than could have been at all anticipated. The great tenderness of the cervical vertebræ, in some cases of sudden fits of insensibility, suggested its existence in epilepsy,* in some forms of which it was found invariably present; a fact very well agreeing with M. Esquirol's dissections in this disease, which so frequently displayed morbid changes in the cord or its membranes. The connexion observable between tenderness at the same part and headach, soreness and pain of stomach, in cases of spinal irritation, occasioned the discovery of its existence in continued fever, in all cases where there was much disturbance of the stomach and head, and induced a suspicion that it was equally the source of Dr. Clutterbuck's cerebral inflammation and M. Broussais' gastro-enterite. The occasional occurrence of shivering fits in spinal cases pointed out some analogy between them and intermittents, and, as was conjectured, most acute tenderness of the whole spine was ascertained to exist in the very few of these complaints which fell within our observation during the last month. It was also detected in numerous cases of neuralgia, in many of paralysis, and in all that class of complaints called mimosa which came under our notice. In short we were finally driven to the conclusion, that the greater number of these disorders either wholly depend on some affection of the spinal column, or are strangely and importantly connected with it." 24.

The second chapter of the work treats of affections produced by irritation of the cervical portion of the spinal cord. Acute and chronic head-aches—brow-ache—pains in the cheeks, face, breast, side, sternum, shoulder or arm, are among the most common symptoms of cervical irritation. We shall advert to several of the cases.

*Case* 6. A young gentleman, aged 20, complained of intense pain in the crown of the head and forehead, with great soreness of the scalp, and general indisposition. He was subject to attacks of this kind, and was usually relieved by purgatives, and rest in the horizontal posture. "There was great tenderness of the five upper cervical vertebræ, pressure on any of which occasioned pain in the vertex and brow." Purgatives and rest were again successful in relieving him. But leeches and blisters were recommended in addition.

*Case* 7. Ann Lynch, aged 19, was troubled with distressing head-ache, especially of the forehead, with sickness of stomach and thirst—pulse 95—tongue white—bowels constipated. Pressure on the first or second cervical vertebra, or behind the mastoid process, excited the pain severely at the brow. She was relieved by an emetic, followed by purgatives, and a blister to the neck.

*Case* 8. "Mary O'Brien, aged forty years, ill three years, complains of pain in the head, particularly severe over the brows and at the temples, and occasionally confining her to bed for days. She is very weak and nervous; has no appetite, and is worse after eating. Is occasionally attacked with pain of stomach.

---

* "When speaking of the diseases induced by irritation of the cervical portion of the cord, we shall give some most extraordinary cases of cure of this dreadful malady."

On examination, there was found extreme tenderness of all the cervical vertebræ, pressure on any of them, or behind the mastoid process, exciting the pain severely at the brow and temples. There was also soreness of the seventh or eighth dorsal vertebra, pressure on which occasioned pain at the ensiform cartilage. In this case there was so much general debility, and so many points of the spine were affected for a length of time, that a rapid recovery was not to be anticipated. She did well after some weeks, by the strictest attention to the digestive organs, a course of tonics, and occasional small blisters to the spine." 30.

Several cases are related, illustrating the various effects produced in different parts of the body by affections of the spinal medulla. Among these, the pain and sickness of stomach bear a prominent part. The stomach, indeed, is seldom free, and the head-ache is usually considered as merely symptomatic of the gastric affection—which, no doubt, it often is; but, observe our authors, much experience in these cases must convince us, that the sickness and pain, and loss of appetite, are still oftener themselves symptoms resulting from irritation at the origin of the par vagum.

"Various affections of the senses, loss of sight, hemeralopia, loss of hearing, noises in the ears, vertigo, spectra or visions, delirium and insensibility, are severally effects of irritation at the cervical portion of the cord, and are sometimes accompanied by headach of a very intense nature. But they are still more frequently met with where the spinal affection is general. Blindness, vertigo, deafness, ringing in the ears, are affections that scarce need particular illustration, appearing as occasional symptoms in almost every severe case which we may have to relate. Hemeralopia is more unusual." 33.

Examples of all these complaints are detailed, and some observations are made on the discoveries and experiments of Bell and Majendie, into which we need not enter. They remark that, next in frequency to affections of the fifth pair, from irritation of the cervical portion of the spine, are perhaps those of the par vagum. In many cases, indeed, the affections of these nerves alternate with one another—an event that might be anticipated from the proximity of their origins, the trunks of both growing from the floor of the fourth ventricle. The affections which they have ventured to connect with irritation at the origin of the par vagum are, sickness, vomiting, anorexia, inordinate hunger, pain at the stomach, pyrosis, and disorder of the respiratory system. We shall condense some of the cases, as they are very important in a pathological point of view.

*Case* 9. Michael Guerin, aged 16, received an injury on the back of the neck, about the fourth cervical vertebra. The blow was violent—he was put to bed—and seized with vomiting—tenderness at the epigastrium—hard, quick pulse, &c. He was bled, purged, blistered, and antimonialized. A degree of subsultus tendinum shewed itself on the third day, but subsided. Nevertheless, he lay in bed without fever, with clean tongue, and spirits undepressed; but could keep neither food nor drink on his stomach. In four or five weeks he recovered.

*Case* 10. A lady, aged 56, was seized with violent pain at the pit of the stomach and right side, attended with excessive soreness along the margin of the ribs back to the spine—constant nausea and vomiting, with febrile symptoms. The pain was periodical, like colic. She had also a stiffness in the muscles of her jaws, as though she was getting locked-jaw. The spine was examined, and there was found extreme tenderness of the lower cervical and upper dorsal vertebræ. There was also some tenderness of the lumbar vertebræ. The vomiting, which had resisted all other remedies, yielded to a blister to the stomach. "Irritation at the trunk of a nerve is sometimes unaccountably relieved by blistering the minute extremities, as Mr. Brodie has shewn, in the occasional benefit derived from blistering the knee in affections of the hip-joint." Her recovery was very slow, and frequently interrupted. It was effected chiefly by continued mild purgatives, anodynes, and rigid diet. She relapsed after this, and her stomach became so irritable, that she was obliged to confine herself to one slender meal a day—and even that was not retained long. She continued in this distressing state a long time, yet with scarcely any emaciation. The termination is not known.

*Case* 11. A patient in a house of industry was pointed out to the authors as not having been able to keep any thing on her stomach for five months. She was a young girl, 25 years of age, pale, weak, emaciated, and confined to bed. The catamenia had not appeared for seven months. No medicine had produced any benefit. On examination, there was found extreme tenderness of the second, third, and fourth cervical vertebræ, the slightest touch causing her to shrink and gather her features. There was no tenderness or enlargement in the hepatic or gastric regions, and the abdomen was much shrunk. As the vomiting was the most distressing symptom, a blister was applied to the cervical vertebræ. As soon as the blister had risen well, the vomiting ceased. The application, however, was renewed, and there was no return of the sickness.

Some cases of incurable organic disease, where vomiting was a harassing symptom, are related. The blistering of the spine relieved the sickness, though it did not, of course, arrest the organic disease. The following case is remarkable, and cannot be abridged.

*Case* 12. "A young lady, fair, and of delicate make, felt a gradual and uncontrollable languor growing upon her, attended by frequent headach and loss of appetite. After continuing in this state for some weeks, she was attacked with sickness of stomach and violent ineffectual efforts at vomiting, brought on by the slightest twisting or bending of the frame, or raising herself to the erect position. It was accompanied by swimming of the head and giddiness, with distressing headach, and followed by frequent fits of syncope, or insensibility, in which she used to remain for one or two hours, pale, cold, and apparently lifeless. She was sometimes affected with palpitations and great sense of sinking, with pain in the stomach and sides, especially the right, and extreme coldness of the feet; she had no appetite; the pulse was eighty; the skin cooler than natural; the tongue clean. The pain, sickness of stomach, and retching, were considerably relieved as long as she remained in the horizontal position; but the slightest motion of the trunk occasioned their instant recurrence, so that, when making the bed, it was found necessary to remove her in a recumbent position. She constantly complained of inexpressible langour. There was acute tenderness at the first and second cervical vertebræ, and it existed in a less degree in all the dorsal.

She was for some days treated by saline draughts, opiates, antispasmodics, and mild purgatives, but with little apparent benefit; the headach, giddiness, retching, and fits of insensibility, still continuing to recur on the slightest movement. A blister to the neck was then ordered, and there was immediate relief to all the symptoms; even the pain in the sides abated, and warmth returned to the skin. We could not learn that there had been any suppression or interruption of the catamenia; but it occurred on the next night, and the young lady was up and well in a few days." 52.

Our authors justly observe, that preternatural hunger or thirst, occurring previous to convalescence, may be looked upon as symptomatic of some peculiar state of the cerebral substance, at the origin of the par vagum. The following case shews hunger as the first link in the chain of morbid symptoms attributed to spinal irritation.

*Case* 13. Mary Howard, aged 33, ill a month, complained of great hunger immediately after breakfast or dinner. Her stomach then became sick, but she did not vomit. Then came on pain in the epigastrium, lasting about an hour. The catamenia were regular, and the bowels were free—tongue white, pulse natural. On examination, there was found considerable tenderness at the second cervical vertebra, and, in a slighter degree, at the third; but none lower down. The stomach is painful on pressure. The treatment and issue are not mentioned; but the phenomena are confidently attributed (perhaps justly so) to spinal irritation. It would have been more satisfactory, however, had the remedies been stated, with their result. The following case, which we shall greatly abridge, is not a little curious.

*Case* 14. A delicate young lady had long suffered, at intervals, from oppression, constriction of the chest, hysterical paroxysms, and palpitations. She had tenderness of the cervical—of the middle and lower dorsal—and sometimes of the lumbar vertebræ. She sometimes suffered from neuralgia of the fifth pair of nerves, causing severe toothach. When this was relieved, there was generally pain or sickness of stomach, with oppression, palpitation, and pain in the middle of the back, or sometimes lower down. While labouring under an unusually severe attack, she was advised to have a blister over nearly the whole of the dorsal vertebræ. This occasioned a distressing degree of irritability and disturbance of the constitution, evincing itself by extraordinary hunger and thirst. In this state some ale was given her, and she drank off a whole bottle in a few minutes, besides wine, demanding still more. She slept tolerably well that night, and next day came down to the drawing-room. She ate very heartily—took two glasses of wine before dinner—then ate broiled mutton, drank a bottle of ale, and said that nothing but wine and ale would satisfy her. An hysterical fit occurred, and was succeeded by a calm. She complained of pain in her side, which nothing but eating and drinking would relieve. She had eggs and ale for supper. "During that night, she got seven glasses of wine, and draughts of camphor julep." The mother prudently refused any further supply, since she was "frightfully impatient, talking incessantly, and begging for wine and ether." Her stomach at length discharged its contents, together with bile, after which she was better. Next day, though the appetite was ravenous, the diet was restricted. It is necessary to state, that this young lady was previously unaccustomed to the smallest quantity of wine or ale. The inordinate sense of hunger and thirst, in these cases, is, our author thinks, connected with a feeling of nervous sinking, which is relieved by anything, solid or liquid, taken into the stomach. In such circumstances, it would not be safe to withhold stimulants altogether. Messrs. Griffin give some particulars of a case of unquenchable thirst, in a child affected with spinal irritation, and where four or five of the lower dorsal vertebræ were swelled and tender, with the usual symptoms of tightness, pains in the bowels, and general debility. Having taken some antimony for a cough, vomiting was induced, after which the most intense thirst took place, accompanied by spasmodic yawnings. Draught after draught was swallowed with the most surprising avidity, and still there was the greatest impatience for more. During the attack, the pulse was too quick to be counted. Some antispasmodics, with ether, relieved her.

Passing over many cases, some from the note-books of the authors—others from periodicals, including one from this Journal, we come to a class of cases in which stupor or coma is a prominent feature.

*Case* 15. A girl, aged 14, complained of slight head-ache and heaviness for some time, but was not unwell in any other respect. One day, while reading, she fell suddenly on the floor insensible, but not convulsed. She soon recovered sense. She had three attacks of this kind within a short period of each other. On examination, great tenderness was discovered at the third cervical vertebra. Some blood was taken from the arm, and purgatives were exhibited, which prevented the attack for three months. On its recurrence, the same remedies were again resorted to; but in eight or ten weeks there was a fresh attack. A blister was now applied to the spine, and directed to be repeated at intervals. Nearly a year has now elapsed, without recurrence of the fit. More than once, however, there were threatening symptoms; but a blister occasionally, with purgatives, warded them off.

*Case* 16. Mary Cangney, aged 11 years, had fallen down frequently in fits, in which she lay for some time, with flushed face, speechless, and nearly insensible—generally from one to four hours. The pain in the head was instantly brought on by pressure on the cervical vertebræ—particularly on the second and third. Several of the dorsal were also tender, and pressure there sent a shooting pain up the neck and over the brow. Purgatives for six or seven days mitigated the fits, but did not remove them. Blood was then taken from the arm, and a blister applied to the nucha. The blister was neglected; but the bleeding gave entire relief for six weeks afterwards, when the fits returned in precisely the same shape as before. Bleeding and blistering entirely removed them.

"These cases are of exceeding interest, if only as illustrations of apparently formidable diseases yielding so instantaneously to the treatment. We may venture to infer from them, as well as from numerous others, how much more frequently even affections of the senses are the result of disturbed function than of organic mischief. These fits are frequently, as in the latter case, interrupted or cured by abstraction of blood. Whether this acts by relieving congestion in the spinal vessels, as many have supposed, or by quieting nervous irritation, we must not now stay to inquire. The attack is too frequently mistaken, especially in children, for a serious affection of the head; but is almost invariably at first symptomatic of some distant irritation, as of dentition, disordered stomach or bowels, or of a peculiar state of the uterine system; to which probably it was to be attributed in one of the foregoing instances. It is continually met with in all those spinal or hysteric cases in which the cord is affected to any extent; and though usually, and perhaps necessarily, connected with a deranged state of the cervical medulla, it seems sometimes to occur when the lower portions are more severely engaged; even so low as the middle lumbar." 69.

In the second section of this chapter, our authors take up the subject of "affections of the vascular system, connected with cervical irritation." It is reasonable to believe, what, indeed, experiments have proved, that although the heart, stomach, intestines, and other involuntary muscles, are wholly dependent on the ganglionic system for the exercise of their respective functions—yet that these same muscles and organs are subject to the influence of the brain and spinal marrow; and may be disturbed in their functions hourly by such influence. Several cases are detailed by our authors, illustrative of palpitation of the heart, angina pectoris, cough, &c. We shall glance at one or two cases.

*Case* 17. A labourer, aged 28 years, after severe labour in carrying loads of manure on his back, felt pain between the shoulders and in the back of the head, with continual drowsiness. He sometimes fell into a state of insensibility, in which he lay some minutes. He lost all appetite, and was frequently attacked with racking pains or cramps in the stomach and sides. After some weeks, the head-ache became distressing, accompanied by palpitations, tremblings, or shiverings, and universal throbbing of the arteries. "He felt pulses in every part of the body." The palpitation often occurred in sudden paroxysms, the heart beating as if it would burst the walls of the chest. It frequently extended to the descending aorta, and was most distressing at the back. When attacked in this way he was always obliged to spring from his bed, and walk about the room till the throbbings ceased. After some months, his head-aches became so distressing that it was necessary to bleed him largely from the temporal artery—with considerable benefit. But the palpitations continued, usually preceded by general rigors, followed by pains between the shoulders, profuse perspirations, &c.

The treatment consisted of bleeding—the constant use of antimoniated ointment to the spine—the compound aloetic and assafœtida pill, &c. and one or two blisters to the back of the neck. There was a perfect recovery in three or four weeks.

> "It is necessary again to call the reader's attention to the spinal tenderness which, from its almost invariable presence in such cases as occurred to us, we believe may be found in the very earliest stages of many of those dreadful fits of palpitation, angina, syncope, &c. dependent on dyspepsia and hysteria. It can matter little, whether it be characteristic of a primary affection, created we know not how, or of one originating in the mental, the digestive, or generative organs, if it is capable of becoming independent, and reacting on the system. The only question of importance appears to be, is it occasionally or ever induced by organic disease of the heart or large vessels? or is it not rather the precursor of these?" 79.

Our authors observe that it may appear paradoxical in them to suppose, that functional disorder can imitate the *physical signs* of organic disease. What are "physical signs" but mere *symptoms?* Palpitation of the heart—bruit de soufflet, &c. are called physical signs; but they are mere symptoms, which functional disorder can imitate. It is the visible *post-mortem* changes that they cannot imitate. Laennec acknowledges that many of the organic diseases of the heart—or, at least, their outward physical signs—as bruit de soufflet—may be imitated by functional disorder.

"With cases of violent, or irregular, or depressed action of the heart may be considered similar affections of the arterial system, which will very generally be found to depend on that morbid condition, of a greater or less extent of the cord, called irritation. Preternatural throbbing of the temporal and carotid arteries will usually be found connected with cervical tenderness, while the pulsations of the aorta in the epigastric region are more probably referable to irritation of the upper dorsal. We speak in this qualified way, because, in all the cases we have met with, there existed tenderness of the whole or the greater part of the spine. Before functional disorders of the cord became a subject of investigation with us, we were often much alarmed and perplexed by these epigastric pulsations; and, in cases presenting many marks of an exquisitely nervous diathesis, were imperfectly contented to assume, with Dr. Baillie, Hunter, and others, that they were not dependent on organic disease; but we now have, it is hoped, in the spinal tenderness, a certain diagnostic, by which apprehension may be at once allayed." 81.

Our authors have had every reason to coincide with Laennec in viewing angina pectoris as a neuralgic affection; and, as far as their experience goes, it is connected with spinal tenderness—whether of the cervical or dorsal vertebræ—or of both. We shall condense a case in illustration.

*Case* 18. A lady, aged 45, had suffered for some years with violent head-ache, especially of the brow or forehead—generally worse in the right than left side—attended with throbbing of the temporal arteries, flushed face, and feverishness.

"The attack comes on in rather a singular manner: her vision first seems suddenly dim or troubled, or the half of any object she looks at disappears. If her eyes are fixed on the window, the glass appears to move like water flowing in sunshine; or, if engaged in reading, one half of the letters seem wanting. This is an infallible precursor of the pain; and, as soon as it occurs, she gives up whatever employment engages her at the moment, and prepares to meet it. Her stomach soon becomes sick, and this is followed by the violent pain in the head, which continues an uncertain period, from a few hours to three or four days. Her right eye is usually affected first, but eventually both. Her general health appears good; her habit inclines to fulness." 82.

She had been ill some years before with constant palpitation and nervous catchings or startings, when in bed—oppression—pain in the chest, arms, neck, and stomach. By one physician it was considered as organic disease of the heart—by another as hysteria. The latter physician cured his patient by aperients and the usual remedies. In an attack like that described, our authors were consulted, and applied leeches to the temples, with active purgation, by which the attack was removed.

"About twelve months after, we were called up in the night to this lady, who said she was dying. It appeared, that, some hours after retiring to rest, she was suddenly awakened by violent palpitation, with a shooting pain in the region of the heart, extending from thence down the shoulder and arm: she started out of her sleep, pale and terrified, and felt as if she was about to die; but in a short time the pain lessened, and the palpitation began to subside. On arriving at the house, she appeared much relieved; but a feeling of languor and apprehension remained. As our attention was at this time beginning to be directed to functional affections of the cord, the cervical vertebræ were examined, but no tenderness was detected. The dorsal were not examined at all. She was treated with aperients, camphor, and other antispasmodics; but the palpitation continued to recur for several nights, though in a much less degree. As it subsided, she began to complain greatly of the back of the neck: the muscles were so sore that she could not bear the gentlest friction, nor could she turn her head or stoop without pain: there was also pain round the throat, and down either shoulder: she had uneasiness in the neck when this attack first came on, but her terror at the palpitation prevented her attending to it. She said, when examined, that the pressure was not made low enough. There was now excessive tenderness of the lowest cervical vertebra. It did not still occur to us to examine the dorsal, as we connected the symptoms in our minds exclusively with irritation of the cervical or pneumogastric nerves." 83.

In the following Summer they were again summoned at midnight to this lady, she having another paroxysm. Her breathing this time was shrill and stridulous, threatening suffocation, and resembling spasmodic croup. The paroxysm, however, was nearly over when they arrived, and on examination, there was found extreme tenderness of the first, sixth, and seventh cervical vertebræ. She speedily recovered from this attack, by the usual means: but a few months afterwards, had an attack somewhat different—viz. pains in the hip, knee, and ankle, coming on in paroxysms of intense severity, darting down the limbs and attacking the joints severely, without heat or fever. This was considered a true neuralgia, and was readily relieved. She would not, however, persevere in applications to the spine, and was therefore likely to have relapse.

There is much truth, as well as force in the following observations:—

"Previous to the time of Corvisart, those resulting from organic lesion were little understood, and believed to be very uncommon. The most obvious cases were treated as nervous disorders. The study of morbid anatomy at length produced a total change in medical opinion; and it soon became a universally-received notion, that most or all of them were connected with absolute physical alterations in the organs affected. As a consequence of this, numerous patients who were suffering from dyspepsia, gout, or rheumatism, were put under the severest discipline, and thrown into a miserable state of dejection, by pronouncing their cases organic. Frequent error has now led us to tread back our steps; and we would only beg to remind our readers, that the stronger the necessity would seem for doing so, the greater must be the risk of our again, like the older physicians, overlooking organic diseases. We know that those called nervous or symptomatic are infinitely the most numerous; but we are also fully impressed with the conviction, that instances of altered structure are not of rare occurrence." 85.

In the third section of this chapter our authors take up the subject of "affections of the respiratory system connected with cervical irritation." Cough is one of the most common—and one overlooked by our best writers. It occurs in many forms, and connected with a variety of symptoms—sometimes hard, dry, and constant—or coming on at a particular hour in convulsive paroxysms, with or without fever—generally accompanied by gastric, hepatic, or uterine disorder. In the majority of spinal cases it appears as a common catarrh, but without expectoration.

"Spinal tenderness may be found in all these cases; and, as has been so often stated, may keep up the symptoms after the cause in which it originated has been removed. Mr. Burns seems to apprehend, that, in young females, if the spinal affection is overlooked or neglected, consumption may be induced. That irritation at the trunk of the respiratory nerves may induce tubercular inflammation as readily as when acting on their minute fibrillæ, in the bronchial membrane, there can be no possible doubt; but this can only be admitted with respect to cases in which a phthisical diathesis prevails. Numerous instances have occurred to us, in which most harassing cough was kept up for months, and even years, by irritation of the cervical portion of the medulla, without inducing any more formidable disease. One case only we recollect to have terminated in fatal consumption; but this was very protracted; and all our entreaties could not induce the patient to persevere in attention to the upper part of the spine, although the most marked benefit, and at one time an interruption of the disorder for months, was procured by repeated blistering; she could not be persuaded that remedies applied to the neck were of avail for what she conceived an affection of the lungs. Indeed it seems very probable, that, in many cases of hereditary phthisis, the disorder commences in this way, and might often be prevented by vigilant attention. Cough may always be excited in these irritations by pressure on the tender vertebræ, and sometimes convulsive fits, or hard barking occurs, from any unusual action of the diaphragm, or accidental excitement of the mucous membrane of the lungs. Thus, a sudden fit of laughter, or of crying, may bring on coughing for hours, or it may be occasioned by a stimulant vapour, or by mere mental excitement." 87.

We have no doubt that the foregoing passage and the cases appended to it, will lead many practitioners astray. No day passes without our seeing the dangerous errors of mistaking real for symptomatic affections of the chest. The patient is always prone to assist in the false diagnosis, attributing the cough to stomach, liver—any thing except the right one! In this way thousands are daily going to ruin, swallowing mercury and a host of remedies for indigestion, hepatitis, &c. instead of having repeated leeches and blisters to the chest, with confinement to the room, or even to bed. Putting our junior brethren on their guard, we shall proceed with some of the cases.

*Case* 19. "A young lady, aged seventeen, of delicate frame, light-coloured hair, and peculiarly fair skin, was attacked with cold; which left a short, slight cough behind it, not very troublesome, but occurring frequently in the day, and accompanied by slight oppression. The oppression was greatly increased on ascending the stairs, and there was then some palpitation. The cheek was always coloured with a pink spot, beautifully defined and bright, especially in the morning. The pulse was quick and readily excited, usually 120 in a minute; the tongue was whitish towards the middle and back part, and the papillæ elevated; she had tenderness at the lower part of the sternum, and often pain there on deep inspiration, and complained of general langour and weakness. There was tenderness of all the cervical, and of the four upper dorsal vertebræ; pressure on any one of which instantly brought on coughing.

The treatment in this instance consisted in the application of ten leeches, and long narrow blisters, often repeated, to the tender part of the spine. Minute alterative doses of the blue pill were also given, and a mixture composed of infus. rosæ, with Epsom salts and tincture of digitalis. The most evident amendment followed this blistering. In proportion as the spinal tenderness abated, the pulmonic affection gave way, and she was quite well in a fornight or three weeks, although the attack had existed for a considerable time previous." 87.

The above, we acknowledge, is a strong case; but still we have our doubts respecting its spinal origin or cause. It must be remembered that the young lady was necessarily confined to the house by the blisterings and leechings, while the saline aperients and digitalis all tended to reduce inflammatory action wherever seated. The same methodus medendi, in fact, would have cured bronchitic inflammation, whether there was spinal irritation or not.

And why did not our authors apply the stethoscope and prove the point at issue. The following case is given by Messrs. Griffin, by way of contrast to the foregoing.

*Case* 20. A lady, aged 17 years, became affected with pain in the right side, with great tenderness on pressure, nausea and feverishness. The latter symptoms were removed by purgatives; but the pain continued, varying its situation slightly—but sometimes shifting entirely to the left side, or both at the same time. Nervous and hysterical symptoms soon came on, with oppression, head-ach, and eventually, a dry, loud cough, with disposition to chilliness and shivering. The pulse was usually 120—catamenia regular. Great tenderness was found about the second cervical vertebra, pressure on which occasioned acute pain in the vertex and brow. Pressure on the lower cervical and upper dorsal excited pain there, and loud coughing—at the seventh or eighth, the same symptom, with pain of chest—and, at the four lower dorsal, there was extreme pain on pressure.

"Leeches and repeated blistering at the tender points of the vertebral column were employed, with great temporary relief; but, when the severity of the symptoms abated at one part, it increased at another, as if there had been rather a transference than an actual removal of irritation. Thus, she sometimes complained most of the head and stomach; sometimes of the distressing cough, pain of chest, and oppression; sometimes of the back and sides. A considerable amendment took place during the use of mild purgatives, followed by tonics; and the cough seemed at last to yield to the sulphate of quinine." 88.

All the symptoms, however, recurred in an aggravated form a few weeks afterwards, in consequence of some mental affliction—the cough, pain in the side, &c. grew more distressing than ever. She was put on a course of mercurial frictions, which removed the cough in a fortnight, after which the general health improved. Still she had another relapse a few weeks afterwards, which was removed by purgatives with tonics, and small doses of opium, stimulating liniments of the spine, &c. Her recovery is stated to be perfect.

Messrs. Griffin confidently conclude that the hard barking cough described by Sir Charles Clarke as affecting young females, and often cured by sudden affusion of cold water, is merely a symptom of spinal irritation, and that spinal tenderness would have been found in all the cases described, had examination been made. Next in frequency to cough is oppression, varying from slight dyspnœa to the most terrific paroxysm of asthma. Various cases are related, but we have not space for their details. They think that spasmodic croup is, in most instances, dependent either on irritation at the origin of the eighth pair, or at some part of the fourth ventricle. Three cases of this affection occurring almost at the same time, confirmed our authors in their views. They strongly advocate the existence of spasmodic croup, as a distinct disease, and different essentially from inflammatory croup. They accordingly take some pains to controvert the opinions of Drs. Cheyne and Kellie, who maintain the identity of the two affections. Few observant practitioners, nowadays, doubt the occasional existence of purely spasmodic croup.

In the fourth section Messrs. G. treat of affections of the motor system, as connected with cervical irritation. They observe that there is probably no form of disorder produced by change of structure, which *irritation* of the same structure may not imitate:—and if chorea, convulsions, epilepsy, trismus, and tetanus can be excited by *organic disease* of the spinal marrow, they may be equally so excited by mere irritation. In some cases of epilepsy our authors made examination of the state of the cervical portion of the spine, and found extreme tenderness there. The cases were of long standing—one of them fifteen years—and yet the facility with which they were relieved must remove all doubt about their being functional affections. Three cases are related in illustration. We shall make room for one.

*Case* 21. "Soon after the occurrence of these cases, a young woman while waiting in the Dispensary for medicine for her father fell down in an epileptic fit, and was violently convulsed. On her recovery, she said she had been subject to these fits for fifteen years, occurring sometimes three times a day. She had done nothing for their prevention for many years past, conceiving it perfectly useless. All through she had at times suffered from pain in the brow, stomach, abdomen, and groins. On examination it was found all these pains were successively brought on by pressure at the corresponding parts of the spine; the tenderness was considerable at the three upper cervical vertebræ, and the eyes looked heavy. Blood-letting, purgatives, and blistering were employed, as in the foregoing cases, with immediate and perfect success. Nearly twelve months are now gone by without the occurrence of a single fit, although it was almost of daily occurrence for fifteen years. This patient was about twenty-nine years of age, and had the catamenia regularly. As the tenderness of the vertebræ had a constant tendency to recur after the blister had healed, she was directed to rub small portions of tartarized antimonial ointment frequently along the spine, so as to keep up a constant counter-irritation there; and she found so much benefit from this plan, that she continued for some months of her own accord, pursuing it strenuously whenever she was attacked with pain in the brow or with other threatening symptoms." 112.

Since the above cases occurred, they have met with some others, chiefly in men, where there was no spinal tenderness, and where no remedies had the slightest good effect. It is probable, therefore, that the convulsions in the female cases were more of an hysterical than true epileptic character. Cases of paralysis, chorea, convulsions, tetanic spasm, &c. are given, but we must refer to the work itself for their details.

## CHAP. III.

This is a very short one, and treats of affections resulting from irritation of the dorsal portion of the spinal chord. These affections are almost wholly confined to the superior extremities, and upper portion of the trunk. They consist, like those already described, of pain or loss of sensibility—in convulsion or loss of power:—or they may appear in the form of general disturbance of function in particular organs. Among the first class we meet with pains in the collar bones, shoulders, arms, &c. often mistaken for rheumatism—or at the middle or lower part of the sternum, supposed to be affection of the lungs, especially if accompanied by dry cough—or in the female mamma, leading to the apprehension of cancer. Again, we find pain of side, just below the right or left breast, frequently exciting suspicions of phthisis—and in the right hypochondrium, simulating liver affection. Lastly, we have gastrodynia, and sense of tightness at the epigastrium.

The attacks in which loss of sensibility is the prominent feature, are those of numbness, and perhaps dyspnœa—loss of power or partial paralysis of the arm or hand—or, when affecting the intercostal muscles, in a sense of weight or oppression at the chest. Among the disturbed functions of particular organs, may be noticed some affections of the lungs, diaphragm, and stomach, already alluded to—cough, oppression, spasms of the bronchial tubes or asthma, hiccup, uncontrollable fits of laughter and sobbing, altered gastric secretions, flatulence, eructations, sense of distention, &c. Though these may be strictly disorders of the phrenic and pneumogastric nerves, they seem to be sometimes connected with spinal irritation.

"There are but few points, on which it is worth while to offer a remark with respect to these affections. As they often set in, or are attended at a very early period by pain and tenderness in the right hypochondrium, and are sometimes relieved by mercury, it becomes an interesting question, whether they have originated in disease of liver, or whether the pain and tenderness are truly nervous, and relieved only by that specific action which it would seem mercury exhibits in some diseases of the cord as well as of the liver. It would also appear very deserving of inquiry, why extreme tenderness, with the corresponding pain of stomach, is so much more frequently met with in the situation of the seventh or eighth dorsal vertebra than at any other point of the spine. Dr. Brown attributes it to the great degree of motion which takes place there; but, if that were the case, we should have it at least as often in the upper lumbar, and much more frequently in the cervical portion of the column, which is in continual motion. Yet this is by no means the fact. Tenderness about the eighth dorsal vertebra is almost always met with in the worst forms of spinal irritation, is seldom absent in the mildest, and sometimes exists in itself the sole malady. It is continually found a prominent and troublesome symptom in advanced pregnancy, in cases of uterine disorder, in derangement of the digestive organs, and in mental affections in females of hysterical habits—constituting this portion of the spinal marrow, as it were, the sensitive centre, to which most functional affections of the system are in the first instance referred." 124.

The cases themselves we are compelled to omit. They are sufficiently illustrative of the foregoing text.

## CHAP. IV.

This is on affections produced by irritation of the lumbar portion of the cord. The authors conceive that functional and organic affections of the kind in question were continually confounded together before the late discoveries in physiology, although a few talented observers had begun to detect and distinguish them previously. Mr. Abernethy pointed out the existence of a disease simulating an affection of the vertebral bones, and yet not of that nature; Sir B. Brodie long ago published cases resembling caries of the hip-joint, or ulceration of the cartilages; yet where the complaint was hysterical. Dr. Gooch, too, gave an interesting account of painful complaints of the uterus, unconnected with organic change. These and many others, are included in the class neuralgia, are generally looked upon, either as idiopathic, or as symptomatic of irritation in some distant organ. "They are seldom attributed to the source we are endeavouring to trace their connection to—disturbance of the spinal marrow."

"We may consider these disorders, like those of the cervical or dorsal portion of the cord, as consisting in preternaturally increased sensibility or action, or in a diminution or loss of either. Among the former, we have pains in the sides or abdominal parietes, colic, pain in the kidney or bladder, or uterus or ovarium, or in the spermatic cord or testes, pains in the joints or muscles resembling rheumatism or ulceration of the cartilages of the knee or hip joint. Again, we have cramps in the bowels or legs or feet, or we have diarrhœa, leucorrhœa, or menorrhagia. Among the complaints marked by loss of sensibility or power, is a sense of weight or fulness of the abdomen with flatulence, and, perhaps, obvious distention. This would seem to depend on loss of sensibility in the intestines themselves, and is generally connected with obstinate costiveness. It is the state sometimes induced by the administration of the carbonate of lead. There is another of the same nature in which the spinal nerves are those chiefly affected, denoted by diminished sensibility of the abdominal muscles. Such is the case with persons who feel as if their bowels were falling out, or with those who feel like the gentleman described by Mr. Abernethy, as if they had no bowels. We have also in the same class defective or suppressed secretions, and partial or total paralysis of particular muscles or organs." 129.

Many illustrations are appended to this statement—partly from the practice of the authors themselves, and partly from the writings of others.

## CHAP. V.

This treats of "General Irritation of the Spinal Cord."

"We shall now (say they) give some cases, in which the tenderness or morbid state of the spine is universal, that it may be seen how perfectly all its symptoms are made up of those belonging to disorder of its separate portions, and how truly they correspond in their immediate seat and nature with the situation of that point of the chain which happens to be most tender or painful. For even when there is universal soreness of spine, it will be almost always found that it is acute at a few of the vertebræ, and more or less obscure through the remainder. Besides this acute tenderness to pressure, there is also very usually a constant though variable pain, or sometimes sense of heat or burning, or mere uneasiness; and this we believe in by far the greater number of instances is felt about the seventh or eighth dorsal vertebra. This pain and the general soreness of spine are very indicative of a tedious and troublesome complaint. The most acute soreness is usually about the situation of the pain; and when the former shifts up or down the column, the pain, although it may not accompany it, generally ceases for the time. The pressing symptoms will in fact be found always more directly connected with the acute tenderness on pressure than with the pain, which, in many instances, attended with strange and variable affections, is yet never complained of, except at the seventh or eighth dorsal vertebra. There is also, in these cases, a frequent disposition to relapse, without any very obvious cause, after considerable improvement; and often, when we have relieved the irritation at one point of the spine, we shall find it has merely been transferred to another, as in the metastasis of gout or rheumatism—a tolerable proof of its frequent dependence on a general morbid disposition in the cord, and of the inutility in such instances of mere local applications, except as occasional adjuvants in the cure. As the first case detailed in this work is more strikingly illustrative of all the possible effects which it would seem the state of the cord we are describing might produce, than any other we could bring, we shall now select from our notes such chiefly as present some unusual or remarkable features. Among these, perhaps the most interesting are the instances in which sudden insensibility is brought on by pressing a particular spot in the spinal column." 147.

Many cases are adduced; but we will select a very long one, which we shall greatly condense.

*Case* 22. A pale and delicate lady, aged 40, was affected, previously to a confinement, with general œdema to an alarming degree, accompanied by head-ache, palpitation, oppression, and tightness of the chest, &c. These symptoms were relieved by blood-letting, at the close of 1828. She had a dangerous state of sinking in her confinement, and complained of a pain shooting from the back to the sternum when she put the child to the breast. The child was weaned, and the recumbent posture was enjoined, and gave relief.

Tenderness on pressure at the 7th or 8th dorsal vertebra, especially at the left side. Leeches and blisters did not succeed. The pain afterwards shifted from place to place, coming on in the evening, and continuing till midnight. Weeks passed in this way, and the symptoms took on a great variety of seat and character, corresponding with increase of tenderness in a greater extent of spine. Fits of insensibility often followed throbbing head-aches, flushed face, &c.

"In the latter end of the Spring, a new train of symptoms set in. After a slight inflammatory attack of lungs, for which some blood was taken, she became affected with a sensation as if a hair, or something of the kind, was stretched across the throat, which, after a time, grew very distressing. It was accompanied by a short troublesome cough, and eventually by a feeling of enlargement of the tongue and palate. This was suddenly followed by extreme difficulty of swallowing, with constant anxious efforts and convulsive action of the muscles of the throat; respiration became shrill, croupy, and difficult; and, when the fit reached its height, seeming imminently to threaten suffocation, she fell back in a state of quiet insensibility, out of which, after some minutes, she sprung up to repeat the paroxysm." 155.

The above is a specimen of one of the forms which the Proteian malady of this poor lady assumed. In the course of a long illness, she seems to have exhausted Cullen's or even Good's Nosology—leaving very few of the long black catalogue untouched. The worst of it was that, though every remedy in the Pharmacopœia was tried, not one of them gave permanent relief, and very few of them afforded even temporary advantage. Although there is almost a certainty of recovery in the ordinary run of such cases, it requires unusual confidence in the powers of Nature, and no very limited range of experience to allay the apprehensions of ourselves or the friends of the patient in such protracted illnesses as that now described. It is curious that one side of this lady's body was always colder than the other. The periodic head-ache by which she was occasionally affected, came on gradually at a certain hour in the morning, increasing till it became unbearable. On some occasions, when the hour arrived, the pain struck through the temple, like an electric shock, in its utmost intensity at once. Carbonate of iron arrested the head-ache, but changed it to a total deafness that came on at the exact hour which the head-ache had formerly observed.

## CHAP. VI.

*Spinal Irritation resembling Inflammatory and Febrile Affections.* The following case, which occurred in the clinical ward of the Edinburgh Royal Infirmary, strongly attracted the notice of the writers. A young woman was brought in with supposed inflammation of the bowels, for which she was bled very largely, and took large doses of opium, with little alleviation of symptoms. On the second or third day hysteria supervened, and then the physician changed his plan with advantage. In his clinical lecture, he stated that hysteria sometimes imitated inflammation so perfectly, that it was impossible to distinguish between them. He recommended his hearers, however, to treat them as inflammatory at the beginning, and afterwards, if hysterical symptoms appeared, to change the system. We do not quite agree with the Edinburgh physician as to the extreme difficulty or impossibility of discriminating nervous from inflammatory complaints. There is generally a character about the complaint and the patient which soon discloses to the observant physician the true nature of the malady. No persons, as our authors justly observe, are so liable to these attacks of pseudo-inflammation, as hysterical females after parturition. So susceptible is the uterine system, in these cases, that great injury is, no doubt, done by depletion to a great extent, under the idea of having hysteritis instead of hysteralgia to manage. We shall make room for two short cases.

*Case* 23. "Mrs. O'B——, aged 30 years, in four-and-twenty hours after a good delivery, was attacked with acute pain and tenderness in the uterine region; with frequent pulse, hot skin, and thirst. There was great pain of back, and bearing down, no expulsion of coagula, and partial suppression of the lochia. The affection was not preceded by any obvious rigor. There was excruciating tenderness of the lumbar vertebræ and sacrum on pressure."

*Case* 24. "Mrs. A. C.——, in twenty-four hours after an easy delivery, was seized with a violent shivering fit, followed by acute pain and tenderness in the uterine region; with frequent hard pulse, hot skin, white tongue, and excessive thirst. There was also severe pain of back and bearing down, occurring in violent fits, without expulsion of coagula, and attended by great depression and weakness in the intervals of ease. The tenderness of the lower part of the abdomen was so great, she could scarcely bear the gentlest touch; but she could stretch down her limbs freely. The lochia were suppressed. There was most excruciating tenderness of the lumbar vertebræ and sacrum.

Both these cases were speedily relieved by fomentations to the abdomen and back, by purgatives, and by opiates with diaphoretics," 165.

Our talented friend, Dr. Marshall Hall, has laid down excellent rules for the guidance of young practitioners on occasions like the present.

## CHAP. VII.

The Seventh Chapter embraces some remarks on diseases resembling those already detailed, but unattended by spinal tenderness—and probably dependent on irritation of the sympathetic ganglia. The deductions from facts in this chapter rest chiefly on hypothesis, and therefore we shall not dwell upon it. The following passage conveys the pith of the chapter.

"We should perhaps involve ourselves in as little error as is possible with our present limited information on the subject, if we merely assumed that the sympathetic ganglia must be, like all other parts of the nervous system, subject to disorder; but that as they are beyond the reach of examination, and their disorders are denoted by symptoms very analogous to similar affections of the spinal marrow and sometimes of the brain, we can only be assured of their existence by the negative evidence, that these parts of the nervous system are unaffected. Cerebral affections, however they may sometimes resemble those of the cord or ganglions, or of individual nerves, have very usually some one or two symptoms peculiar to them. And those morbid states of the spinal marrow so frequent in hysterical subjects, which are most liable to be confounded with disorders of the brain or ganglions, are generally denoted by a considerable disturbance of the nerves of relation, as well as those of organic life, and always by spinal tenderness. This last symptom can only by mere assumption be considered an effect of ganglionic disease, while we have direct proof of its absolute dependence occasionally on some disturbed state of the origin of the spinal nerves, in the facts that in some cases there is no disturbance of any of the viscera, no disorder whatsoever of the system, except what relates to certain of those nerves; and in others the tenderness is the obvious consequence of injury done to some part to which nerves from the spinal cord are distributed. The absence of this tenderness therefore, viewing it as a symptom proper to functional affections of the spinal marrow, gives us tolerable assurance that it is exempt from disorder. Whether the complaints belong to the nervous system at all, we cannot from other considerations be at a loss to determine. The neuralgiæ of either class, according to M. Jolly, have in common a preceding malaise, nausea, chilliness, some præcordial anxiety, an accompanying irritation, and an afflux of blood, with or without febrile action, a determination in perspiration or sedimentous urine, and finally intermissions between the paroxysms. In both classes of nerves, he says, the diseases yield to the same therapeutic means, and generally leave no cognizable trace after death, either in the nerves themselves, or in the organs to which these nerves are distributed." 172.

The cases in illustration are doubtful, and we shall pass them over.

## CHAP. VIII.

Chapter Eight is very short, and adduces a few cases of acute spinal inflammation. Some of these, and of an alarming character, our authors have been inclined to look upon as of a rheumatic nature—because, in all the cases that occurred to them, there was eventual recovery, however slow, without depletion of any extent. We cannot doubt, indeed, that the membranes of the cord are subject to rheumatic inflammations, in common with the serous or mucous membranes of other parts. One short case may be adduced.

*Case* 25. "A young lady was attacked with excruciating pain at the lower dorsal and upper lumbar vertebræ, increased at intervals to a most dreadful degree. She could not move her lower limbs, and suffered much when they were moved by others. She had difficulty and pain in passing water; her skin was somewhat warmer than natural; her tongue white and moist; but the pulse was very little accelerated. She recovered perfectly, in about three weeks, by the use of fomentations, purgatives with colchicum, opiates, and stimulating liniments. She was not blistered. The lady's friends were much alarmed in this case at the total paralysis of the lower limbs." 181.

The tabular view of 148 cases of spinal irritation, including all its forms, follows, and is, of course, insusceptible of analysis. It constitutes, however, a very valuable portion of the work, which will be often referred to, as giving a kind of *coup d'œil* of the whole.

The chief facts and inferences are embodied by the authors in sixteen propositions, which we shall here extract, as they cannot be abbreviated.

"1st. That tenderness at one or more points of the spine is an attendant on almost all hysterical complaints; on numerous cases of functional disorder, where the hysteric disposition is not so obvious: and in many nervous or neuralgic affections.

2d. That many of the symptoms of these affections evidently depend on a peculiar state of certain nerves, probably at their origin, may be reproduced at any moment by pressure, and are often relieved by remedies applied there.

3d. That in all the cases of tenderness of the cervical and upper dorsal spine, there was nausea, or vomiting, or pain of stomach, or affections of the upper extremities; but no pain of the abdomen, dysury, ischury, hysteralgia, or affections of the lower extremities.

4th. That in all cases of dorsal tenderness, pains affecting the abdomen, bladder, uterus, testes, or lower extremities, were usual symptoms; while nausea, vomiting, or affections of the upper extremities, were never complained of.

5th. That nausea and vomiting appeared to bear more relation to tenderness of the cervical spine—pain of stomach to tenderness of the dorsal; but that where there was soreness of both, nausea or vomiting was still more frequent, and pain of stomach scarcely ever absent.

6th. That where several points, or a great extent of the spinal column, is painful and tender on pressure, local remedies are generally less effectual, and there is a strong disposition to transference of the disordered action from one organ to another: the pain or tenderness, in all such cases of transference shifting its place to a corresponding part of the spinal column, leaving the original point free, or with a very diminished degree of tenderness.

7th. That spinal tenderness is seldom or never met with in cases of pure inflammation, except when these accidentally occur in persons previously suffering from irritation of the cord; and that when appearances of inflammation present themselves in any organ, accompanied by a corresponding spinal tenderness, they cannot commonly be removed by the remedies applicable to inflammatory cases, and are often rendered worse by them.

8th. That there does not appear to be a complaint to which the human frame is liable, whether inflammatory or otherwise, which may not be occasionally imitated in disturbed states of the cord; and hence that this disturbed state is one vast source of those complaints called hysterical or nervous.*

9th. That those functional disorders connected with spinal tenderness are very often attended by some disturbance of the functions of the uterus; but that they are by no means always so, since they occur in those who are regular in this respect, in girls long before the menstrual period of life, in women after it has passed, and lastly in men of nervous susceptible habits, and in boys.

10th. That, in fact, they are not necessarily dependent upon the disorder of any one organ; since they are found indifferently co-existing with disturbance of the digestive organs solely, or the uterus solely, or of the circulating or respiratory system.

11th. That, from the cases detailed, we have reason to suppose spinal tenderness may arise from the uterine disorder, from dyspepsia, from worms in the alimentary passages, from affections of liver, from mental emotions, from the poison of typhus, from marsh miasmata, from erysipelatous, rheumatic, and eruptive fevers, and from the irritation arising from local injury.

12th. That it is almost invariably found in connexion with gastric or abdominal tenderness in fever; and this tenderness is probably like the soreness of scalp, pains in the limbs, &c. dependent on the morbid state of the cord.

13th. That whether in fevers or in other complaints, it is met with in the situation of the eighth or ninth dorsal vertebra much more frequently than at any other part of the spine.

14th. That affections attended by spinal tenderness are seldom fatal: that even in those instances of intense irritation of the cord under which patients suffer extremity of pain for years, the event is generally favourable.

---

* Dr. Hall has here a strong support for his valuable observations on the "MIMOSES."—*Ed.*

15th. That they frequently, as well as hysteria, occur with all the appearances of a primary affection of the nervous system.

16th. That affections are occasionally met with, presenting all the marks of the hysteric character, and perfectly resembling cases described as those of spinal irritation, but unattended by spinal tenderness, or any other direct indication of a morbid state of the cord." 203.

From a long chapter entitled "Concluding Observations," we can only make room for a single extract, exhibiting, as it were, an epitome or condensed description of this extensive class of human ailments.

"Irritation of the spinal cord attacks persons of either sex and of all ages, but especially females at or after the age of puberty. Those of the hysteric temperament are by far more disposed to it than others. It occurs or commences in a variety of ways, and in whatever shape or degree it affects a person, may exist for a considerable time without any remarkable change. It sometimes declares itself by simple pain affecting the branches of a single pair of nerves, generally in the right or left side beneath the mamma. In such cases it seems very analogous to nervous tooth-ach, or chronic rheumatism; occasions little disturbance of the general health, and abates or recurs like these with the changes of the weather. It is very often, as Dr. Brown of Glasgow has described it, a wearying numbness rather than pain, or a sensation as if a walnut or other hard substance was pressed within a tight belt. Sometimes it begins in the right hypochondrium, extending usually to the shoulder and arm, as in complaints of the liver. At other times it supervenes on a slight inflammatory or bilious attack, and is ushered in by cough and oppression, or pain, or fever and vomiting, or by paroxysms of hysteria, faintings, or palpitations. Nervous symptoms very soon appear in the greater number of these cases, however they commence, or whatever complaint they simulate. The heart, the vascular or respiratory system, become affected. We have lownesses, fits of crying, or a disposition to it from very trifling causes, with langour and debility. There is occasionally a coldness of the extremities, or of the whole person, a chilliness sometimes amounting to actual rigor, or perhaps the patient complains of odd or anomalous affections, which may not appear to have the remotest connexion with the original complaint. The pulse becomes quick and irritable, or may have been so from the commencement, and the tongue furred; two symptoms very indicative of an obstinate and troublesome attack. The stomach, the bowels, or the uterus, are occasionally affected in various ways; there is pain or pyrosis, constipation or diarrhœa, obstruction of the menses or menorrhagia, or there may be disturbance of the bladder; and these complaints frequently in the same person alternate with each other, or with disorder of the lungs or heart; but whatever the nature of the complaint may be, it is usually worse at the catamenial periods. In the severe cases epileptic fits sometimes take place, but more commonly the patient is seized with a degree of insensibility, a kind of cataleptic trance, in which all external objects are lost to her, and she is only conscious of intense pain, with throbbing or rushing of blood to the head, and perhaps sickness of stomach. When recovered from this, the state of nervous irritation is at times quite indescribable. We have heard patients complain that the slightest touch thrilled through the whole frame, or that every half inch of the surface of the body felt as if pinched or twisted, or as if screws were turning in it. Pains in the extremities, and especially in the joints, are very usual. When severe they are often supposed to arise from rheumatism; and there is generally some loss of muscular power in the upper or lower limbs, as the upper or lower portion of the cord may chance to be affected.

This is a general description of the complaint, but it will not always enable us to distinguish cases of spinal irritation from those of organic disease, which are often attended in delicate or nervous habits by many of the symptoms enumerated. Those more particularly diagnostic of irritation of the cord are,

1st. The pain or disorder of any particular organ being altogether out of proportion to the constitutional disturbance.

2ndly. The complaints, whatever they may be, usually relieved by the recumbent position, always increased by lifting weights, bending, stooping, or twisting the spine; and among the poorer classes, often consequent to the labour of carrying heavy loads, as in drawing water, manure, &c.

3dly. The existence of tenderness at that part of the spine which corresponds with the disordered organ.

4thly. The disposition to a sudden transference of the diseased action from one organ or part to another, or the occurrence of hysterical symptoms in affections apparently acute.

5thly. Perhaps we may mention the occurrence of continued fits of yawning, or sneezing. They are not very common symptoms; but as scarcely ever occurring in acute or organic diseases, they may generally be considered as characteristic of nervous irritation.

Of all these symptoms, the increase of pain on lifting weights, and the spinal tenderness, are the least equivocal. Pain of stomach, when dependent on, or connected with tenderness of spine, may always be increased by placing a weight on the head, or lifting one. The female peasantry in this country, usually complain of a great aggravation of their sufferings from carrying cans of water; and sometimes the morbid sensibility of the nerves is so extreme, that we are told, when they step inadvertently on a pebble, such sudden pain of stomach seizes them, that they feel as if life would leave them.

With regard to the spinal tenderness, we shall find on examination, there is something peculiar about it. The symptom is of course common to irritation and to a much more serious disease of the cord, but in the former it is more acute, especially in its early stage, than it is in the latter; and we sometimes find, as soon as the finger reaches the affected vertebræ, that the patient springs as if an electric spark had passed through her, or falls into a fit of insensibility, or syncope." 215.

## CHAP. X.

Although the Ninth Chapter was headed "concluding observations," we find a TENTH Chapter, and a very long one, succeeding the conclusion, and entitled "TREATMENT." This little peculiarity in the arrangement, is merely indicative of the side of the Channel on which the work was written: and is not adduced as any blot on the performance. It might have led some of our nimble-fingered critical reviewers, however, into a scrape—especially those who review by the headings of chapters, and who seldom undergo the drudgery of reading a work from beginning to end, before the process of criticism commences.

### TREATMENT.

After all the views and reviews of "spinal irritation" which we have read in the work before us, and extracted for the edification of our readers, we certainly were not prepared for a second edition of "concluding observations"—and still less for the following astounding announcement:—"We shall simply review the history and nature of the complaint, and offer some observations which may, we hope, lead to a judicious mode of treatment." 221. There can be no necessity for us to review those various points which are already before our readers, and we find it rather difficult to condense the views of our authors, since they are not enumerated with much order or clearness. They class spinal affections partly according to the nature of the individual constitution—the exciting causes—and the *degree* of the malady. The distinction of cases runs thus, and is nearly the same as that adopted by Dr. Brown, of Glasgow—namely,

> 1. "Cases of pain affecting a single nerve, with tenderness at a corresponding part of the spinal column, and little or no constitutional disturbance.
>
> 2. Cases of a more complex nature, with tenderness of the spinal column to a greater extent, and continued symptoms of disorder in the digestive or uterine, or sometimes in the cerebral functions.
>
> 3. Cases of a similar description, but in which the disturbance of function in the different organs appears subsequently to other manifestations of the disease, or exists evidently as a secondary affection. These are chiefly the instances in which we observe a frequent metastasis of the diseased action from one set of organs to another." 223.

The neuralgiæ of the first class often continue a long time, without materially affecting the general health. The disorder is local, and is usually relieved by local remedies—namely, by leeching, blistering, &c. When, however, pain in the side or ensiform cartilage is excited by pressure on the spine—or this irritation is still kept up by pyrosis, worms, mental anxiety, or the like, local remedies will not be sufficient. Even where the complaint persists from habit, general means will be necessary in addition to local ones. This is the more necessary to be remembered, since many people have come to the conclusion that spinal irritation did not exist because it did not give way to topical remedies. Besides, spinal irritation may owe its origin to disorder or irritation in some other and even distant organ Sir B. Brodie justly remarks that, in these latter cases, we cannot expect permanent benefit to arise from applications made to the part referred to by the patient, since the cause may be at a distance.

> "If you would cure your patient," says Mr. Brodie, "you must, in each individual case that comes before you, study the disease pathologically. Endeavour to trace the symptoms to their true origin; and if you can succeed in doing so, you will in many instances learn at the same time in what manner a cure is to be effected; while in others, in which the disease does not admit of a cure, you will learn this also—to avoid tormenting your patient with useless remedies; and at any rate you will be satisfied you can do as much for him as your neighbours." 225.

Recent cases, however, are generally easy of cure. When of only two or three weeks' standing, they are sometimes perfectly relieved by an active purgative, as is the case with hysteria. The most perplexing of neuralgic pains is that of the stomach, with or without pyrosis. It is occasioned by a variety of causes, and takes place in so many different states of that organ, that it is very puzzling. In some people it comes on when the stomach contains food—in others, when it is empty—in a third class, it is most troublesome while the chyme is passing through the pylorus into the duodenum—or while undergoing the process of digestion in the second stomach. It is, as our authors justly observe, exceedingly difficult to distinguish the gastrodynia dependent on spinal irritation, from that which is occasioned by irritation of the gastric nerves themselves—and either of these from subacute or chronic gastritis. Stomach-disorders and pain are exceedingly prevalent among the Irish peasantry—partly from the cold and flatulent nature of their vegetable diet—partly from the consumption of whiskey—and partly, we may well believe, from the triste moral emotions produced by want, discontent, and political agitation. Be this as it may, our authors were very unsuccessful in their dispensary practice, as the miserable patients had no means of assisting the remedies by proper regimen.

> "Out of sixty-nine cases of affection of the cervical and dorsal portion, there was pain of stomach in fifty-seven. Indeed there is no part of the spinal marrow that seems to be the centre of such general sympathy, as about the situation of the eighth dorsal vertebra. If a nervous or hysterical woman hears unfortunate news, if the catamenial flow is interrupted, or if the uterine action in advanced pregnancy becomes too powerful for the system, we believe there is no part so readily affected as the centre of the dorsal spine, no complaint so usual as the concomitant pain of stomach." 227.

In cases of simple gastrodynia, with spinal tenderness, it will always, they remark, be proper to try the effect of local treatment—leeching and blistering. The same to the epigastrium was often successful, after it had failed in the other way. After enumerating various medicines which they tried in gastrodynia with but little advantage, they announce a popular one, which exceeded in efficacy the regular prescriptions of the physician.

> "But all these remedies have seemed very inferior in efficacy to a popular one among the poor in this country, which we have fallen upon by accident—the super-sulphate of alumen. We first saw it used in the case of a patient afflicted with pain of stomach, sometimes occurring in violent paroxysms, and accompanied by vomiting and pyrosis. There was great tenderness at the pit of the stomach, and in the right hypochondrium. The complaint had subsisted long, and he had been under a variety of treatment with little benefit. It was, in fact, eventually supposed to depend on serious organic disease of the liver and of the stomach. About this time, however, he was prevailed on, by a friend of his, to take an ounce of alum in a dose. It acted as a purgative, and gave such immediate relief, that he was induced to repeat it. The benefit he again experienced was very considerable; and, by persevering in the remedy, a cure was eventually effected." 229.

They are now in the habit of prescribing a tea-spoonful of alum powder, twice a day, with two aloetic pills every night, with great benefit to their patients—"acting, in some instances, like a charm, on a state of disorder which has resisted other remedies for years."

> "The success with which these and other similar medicines are occasionally exhibited in cases of gastrodynia and pyrosis, accompanied by tenderness in the epigastrium, gives us a tolerable assurance that they are not always, nor even commonly, dependent on any inflammatory state of the mucous membrane They are evidently connected with disordered functions of the nerves." 229.

Where a larger portion of the spine is affected, and various organs deranged in consequence, we must act according to the nature of the case. In respect to blisters, "they should be long and narrow, so as to cover many of the affected vertebræ." The preternatural sensibility of the nervous system is to be obtunded by narcotics—especially by henbane and belladonna—the latter as a plaster to the spine, or to the suffering organ. The recumbent posture they conceive to be quite unnecessary in the generality of cases —and, in many instances, injurious.

> "Of all the remedies which we have made use of, in severe cases, mercury was certainly the most successful. We were first induced to try it from its beneficial effects in instances, where spinal irritation was mistaken for a liver complaint, to two of which we may refer. It will be perhaps a matter of dispute whether in these, an affection of liver did not really exist as the primary malady; but we believe it will be found, that mercury frequently possesses some specific influence over disorder of the cord, whether connected with disease of liver or not. The hard, loud, hacking cough, which is so often a troublesome symptom, will sometimes yield to a mild mercurial course where every thing else has failed. We regret that our experience of its effects has been as yet too limited to permit our recommending it as very generally applicable; but even if it should prove so, it ought to be held in remembrance, that there are many constitutions either so enfeebled or peculiar, as totally to preclude its employment." 240.

Of all remedies, however, which prove influential in removing irritation, those which act through the medium of the mind are probably the most powerful and sudden.

> "The magical effects sometimes witnessed on change of air, are, we believe, for the most part attributable to the influence of change of scene and place on the mind; and are only to be equalled by the extraordinary amendments or recoveries which ocsasionally take place from mere mental emotion.
>
> We have seen a patient, weak and emaciated, harassed with cough, despaired of by her friends, and deriving no relief for months that she was under the care of experienced physicians, recover, as if by charm, on removing a few miles into the country. What, we may ask, were the agents in so sudden and so wonderful a cure?—sensations that the heart showed no consciousness of, and ideas impressive only from their novelty! There were no powerful excitements, no violent passions or emotions in operation, nothing but the quiet and agreeable, the silent workings of new feelings, new trains of thinking; and the result of this diversion of the mind from its former depressing reflections, diminished sufferings and renovated hopes." 243.

From a more extended sphere, as well as period of observation on this point, we think we can safely say that our authors have overrated the moral, and underrated the physical effects of change of air in chronic ailments generally. We have seen the beneficial effects of this change on health, as sudden and great in the most obtuse intellects, as in people with the most sensitive feelings and impressionable imaginations—nay, often more so in the former than in the latter class. This could hardly have been the case, had the body been solely, or even principally, influenced through the medium of the mind. By this we do not mean to disparage the powerful agency of the soul on the body: we only insist on the physical agency of change of air on health, as one of very potent influence.

We have now brought a long, faithful, and, we hope, useful analysis to a close, seldom intruding our own observations or reflections, lest the thread of the subject should be broken, and the views of the authors interrupted. If the investigation be important, as we are sure it is, we have aided that investigation by diffusing the main facts and features of the work through an infinitely wider circle of practitioners than they otherwise would visit in the book itself. We should not have bestowed this labour on a work of inferior utility—and we trust that we have done both the authors and our readers justice in our task. It is no disparagement to the *former* to consider them as men, and liable to err. It is not unusual for men of the greatest talent and integrity to become, as it were, enamoured of the subject of their investigation, and like all lovers, to be a little blind to the failings of their favorite. It is not improbable that this has been, to a certain extent, the case with Doctor and Mr. Griffin. They may have seen, or rather fancied, spinal irritation, where it did not exist, or where it only formed part of general nervous irritability, especially in females. We all know that a distinguished physiologist and physician *felt* or fancied tenderness of the epigastrium in three-fourths of his patients, and inferred from this *fact* that chronic gastritis was their complaint. Other practitioners followed in the same path of investigation, but less biassed in favour of a theory, and soon discovered that this epigastric tenderness very often existed in people who were in perfect health—and that, in comparatively few, was it a criterion of inflammation in the subjacent organ. So it may turn out with tenderness of the spine. Even since the commencement of this analysis, we have taken several opportunities of examining the spine, and in more than one or two instances, found patients complain of tenderness in certain portions of it, where there was not the slightest symptom to indicate irritation there, nor to suspect its existence at all,—their complaints being totally unconnected with such class of maladies. This phenomenon is not easily accounted for. On the other hand, we this very day (first of November) traced a complicated and anomalous train of symptoms to spinal irritation, before unsuspected. When we pressed steadily on a certain portion of the spine, the most acute pain was instantly felt in the epigastric region; and this was proved to be no deception by repeated examination of the whole column. We therefore conscientiously recommend the investigation to the serious attention of all our brethren.

## AN INQUIRY INTO THE CLAIMS OF DR. W. HARVEY TO THE DISCOVERY OF THE CIRCULATION OF THE BLOOD, &c. &c. &c. By *J. Redman Coxe*, M.D. &c. &c. &c. Philadelphia, 1834.

WE admire the erudition, the elaborate research, and the unwearied industry of Dr. Coxe, as manifested in this volume: but we cannot extend the same admiration to his wisdom—nor yet to the *spirit* with which the inquiry is conducted. We know not how the matter may stand on the western shores of the Atlantic, but we are quite certain that not one in five hundred of the profession here care a rush whether Galen, Aristotle, Hippocrates, Cæsalpinus, and hundreds of others, anticipated our countryman by conjectures, hypotheses, or vague suppositions respecting the circulation of the blood. No great discovery was probably ever made instanter. Conjectures long precede proofs, in most instances. The real and effective discoverer, we imagine, is he who fixes the attention of the world on, and *proves* the discovery, by bringing it into complete operation. If Harvey or some other person had not *demonstrated* the circulation of the blood, all the hints and suppositions of his predecessors, from Hippocrates downwards, would have gone for nothing. Of what use was the *actual knowledge* of vaccination, possessed by the Gloucester farmers, till Jenner fixed the attention of the profession on it, and proved its efficacy in preventing variola? Great numbers of Harvey's contemporaries denied the truth of the discovery—and afterwards, when the world acknowledged the truth of it, they attempted to prove that the circulation was known to many others before he was born. This has ever been the case, and arises from the envy and jealousy which men feel towards each other while living and rivals; but we did not expect to find such a man as Dr. Coxe raking up the musty records of antiquity for obscure passages that might deprive Harvey of a fame which has now been almost unanimously settled on his name for nearly two centuries. And for what purpose? Will Galen's ear be soothed, or Harvey's offended by the translation of laurels from the memory of one to that of the other? Alas no! Galen has more posthumous fame than the most ambitious could covet—and Harvey's claim to the discovery of the circulation will not be set aside by a hundred volumes written with all the diligence, learning, and scrutiny even of a Coxe. Should our author ask us if we had perused his arguments and the documents on which they are founded, we would candidly acknowledge that we did not read one tenth part of them—and for this reason, that we think a great deal too much of precious time and unquestionable erudition has already been expended on the writing of the book—therefore will we not increase the loss by reading it. If the discovery of the circulation has not, as Dr. Coxe asserts, been of any material use in the practice of physic or surgery,* of what use can it be to shift the discovery itself from one man to another? Let Dr. Coxe answer that question.

"In this last particular, (says Dr. C.) its general influence may, perhaps, be judged of, by the following extract from Pitcairn who shows, I apprehend, both with candour and with justice, how little, if at all, it superseded the practice of the ancients! At p. 17:

"Omnes vero medici, qui, methodum ullam, quamvis circulationi, ut credi volunt, convenientem tradiderunt *uno ore docent*, sanguinem, aut in partibus, aut glandulis hærere: et quia sanguis, sive crassior, sive subtilior, in partium interstitiis detentus, eadem omnia symptomata et inferre et pati potest, quæ veterum sanguis circulandi nescius. *Idcirco eadem medendi methodus a recentioribus est ubique fere adhibita, quæ antiquis placuit, quamvis plerumque experientiæ et legibus circulationis contraria. Unde non est mirandum non majorem factam esse mutationem in arte medica*, cum morbi plerique oriantur vitio circulationis in vasis minimis, quam multii recentiorum non melius Hippocrate et Galeno intelligere se demonstrant.'

These are strong, but perfectly just estimates, of the *very slight degree of real practical improvement*, beyond that of former experience, which Harvey's discovery of the circulation, admitting it to be both new and perfect, had actually introduced." 88.

Now it appears to us that Pitcairn, in the above passage, alluded exclusively to the practice of physic—"arte medica"—and that he could not be

---

See page 88.

so blind as not to see the importance of a knowledge of the circulation in the practice of *surgery*. Without this knowledge, on which side of an aneurism would a surgeon cut, with the best chance of success? But it is needless to pursue the subject. The following is a fair specimen of Dr. Coxe's arguments and facts. Hippocrates, De alimento, speaks thus:—

> "'Venarum radix hepar est: arteriarum radix est Cor. *Ex his per omnia* sanguis et spiritus, *pervagatur*, calorque *per ea* permeat.' And could such expressions mean ought, or any thing, if not implying all that is now implied or understood by the Harveian route? Is not the blood distinctly characterised as flowing to every part, by this vascular apparatus, and the heat also; and is much more now implied, than was fully appreciated by Hippocrates; although not speaking exactly in similar terms; or denoting that particular route, which was more correctly laid down by Harvey, but without completing it? can this alone confer the exalted privilege awarded him? and shall not an iota of credit be allotted to others! Well may these neglected worthies, when viewing their birthright and blessing surreptitiously bestowed on a younger brother, like Esau to Isaac, exclaim, 'Hast thou but one blessing, O my father!' Can we draw no probability of an individual view of a particular subject, except it be clothed in one peculiar form of speech! Can the following extract by Pitcairn from Hippocrates 'De Corde,' admit of reasonable doubt as to a full conviction of a circulation, and that *perpetual*; although the precise route was then, and *is yet*, not conclusively settled! 'Hi sunt humanæ naturæ fontes; hinc flumina excurrunt, quibus corporis alveus irrigatur.' Surely the above, and others that might be adduced, might well establish a prior claim to the doctrine of a circulation." &c. 97.

When such crude absurdities, ignorance, and errors of the ancients, are put forth to disturb the merit of Harvey, as to the discovery of the circulation, we may well hope and believe that the wise "Father of all" has placed an impenetrable barrier between the dead and the living—if it were for no other purpose than to "save us from our friends," when they are injudicious enough to hold forth our *failings* to the world as pre-eminent *virtues!* If Hippocrates can see, from the Heavens above, or the Hades below, the exertions of Dr. Coxe to prove his anticipations of Harvey, he will sigh from the inmost recesses of his soul, and bitterly lament that he ever ventured on speculations respecting the circulation of the blood, which were grounded on mere conjecture, and without an atom of proof—or, what is more important, without a shadow of truth.

Considering, then, the short and rounded period of man's existence in this world, the difficulties that beset him in acquiring medical knowledge, and the absolute necessity of dedicating every spare moment to *useful* science, we cannot help deploring the waste of time and talent which the work before us has cost. We have been, we believe, much longer in the exercise of our profession than Dr. Coxe—we have, perhaps, laboured as hard, and observed as carefully as he has—and yet we confess that the wide field of observation long open before us, has only tended to make us regret the little that we know, and the immensity we have yet to learn—without time to do so! How then, we ask Dr. Coxe, can he afford to throw away so many months and years upon researches that, confessedly, can tend to no useful practical purpose whatever?

Dr. Coxe deplores the little attention which is paid by the moderns to the writings of the ancient medical authors. There was a time when we had some leisure, and we took that opportunity of wading through the fathers of physic, from Hippocrates to Sydenham, marking, with the pencil, every passage that appeared either curious or useful. We have no hesitation in asserting that we derive not one iota of advantage from all this labour, when we come to the bedside of sickness—unless it be from *exercise* of the mind, which we strongly suspect might have been more beneficially exercised in other ways. We cannot, therefore, conscientiously advise our junior brethren to study the fathers of physic, till after they have acquired all the knowledge, immediate and collateral, which the moderns have accumulated. This done, we recommend them to dedicate nine-tenths of their time to the study of Nature, as exhibited in the phenomena of sickness and health,—and the other tenth to—Hippocrates and his descendants, if they please.

Although we cannot approve of the *animus* which Dr. Coxe occasionally displays towards Harvey, in his strictures and criticisms; yet we fully and freely acquit him of any "paltry desire to diminish the glories that have encircled his brow." We sincerely hope that the next offspring of Dr. Coxe's head and pen will call for more commendation in the pages of the MEDICO-CHIRURGICAL REVIEW.

## ON FIBROUS TUMORS, OR POLYPI OF THE UTERUS.

I. DES TUMEURS FIBRO-CELLULEUSES DE L'UTERUS; VULGAIREMENT DESIGNE'ES SOUS LE NOM DE POLYPES DE LA MATRICE.

[*Leçons Orales de M. Dupuytren, Article* XVII.]

II. ON PEDICULATED FIBROUS TUMORS OR POLYPI.

[*Treatise on Diseases of the Uterus and its Appendages. By Mad. Boivin and A. Dugès. Translated by G. O. Heming, F.L.S. &c. Octavo, pp.* 559.]

POLYPI of the uterus have attracted some attention in the last few years, and have been illustrated by the labours of the best accoucheurs and morbid anatomists of the day. M. Dupuytren has paid considerable attention to the subject, or rather to that part of it in which the surgeon is peculiarly interested. The affliction which weighs on this eminent, we might almost say illustrious man, and threatens with his loss humanity and science, surrounds his writings with a fresh and indeed with a painful charm, and confers on them something approaching to the character of posthumous productions. Should his present illness lead to the event anticipated by all, more particularly by himself, his native country will have reason to deplore the deprivation of an ornament to his profession and to her. But we quit with haste the unpleasing theme.

We shall not attempt to amalgamate the separate articles before us, but set before our readers in succession the facts and the opinions of Mons.

Dupuytren, and those of the editors of the treatise on diseases of the uterus. We shall not, of course, extract or allude to the elementary matter in either, supposing, as we think we may safely do, that this is familiar to the greater portion of our readers.

The Baron commences his lectures with the details of two cases in which a polypus existed, and was removed by the operation of division of its pedicle. The cases give rise to some remarks, and the latter lead to a general history of fibrous tumours of the uterus, drawn from a vast fund of observation and experience. We shall start with this general account of the disease.

Fibrous tumors, says the Baron, though various in form, are generally rounded, and composed of a tissue resembling that of ligaments and tendons. They are found in all parts where the fibrous element abounds, but more frequently in the uterus than in any other organ. It is important to ascertain and to remember the situations from which they spring.

1. Some arise from the external surface of the uterus, between its proper tissue and its peritoneal tunic by a peduncle which sometimes is extremely small; this and some cellular tissue are the sole connexion between the polypus and fibrous structure of the uterus. The tumor thus formed projects into the abdomen, lifts up the peritoneum, and may attain but trifling or very large dimensions.

2. Others form in the actual substance of the uterus, equidistant from its inner and its outer surface. Yet they do not appear to grow from that structure, but are merely placed in it, separating its fibres, and sometimes so insulated as to seem encysted. They present no peduncle. Their increase is slow, and though usually smaller than the previous variety, they occasionally equal the head of an adult in their dimensions. In some instances, they augment equally in every direction; in others, they project towards the cavity of the uterus, or towards that of the peritoneum. These tumors are beyond the operations of surgery.

3. This appears to be an intermediate and unnecessary class. It consists of such, with peduncles or without them, as spring rather from the outer or the inner surface of the uterus. In the latter case they approached the first kind; in the former they will be found to resemble the next.

4. These tumors are often situate on the internal surface of the uterus, and constitute either simple protuberances into the uterine cavity, or arise, which is more frequent, by distinct peduncles.

The pedunculated tumors, springing from the internal surface of the uterus are those which are usually known as polypi, and consist of a root, a peduncle or neck, and a larger portion or a body. Their surface is covered by a fine adherent membrane, continuous with the mucous tunic of the uterus, by which it appears to be formed.

It is difficult in many instances, to discover by the touch the peduncle of the polypus, unless it be extremely long, and the polypus itself has passed into the vagina. The root of the tumour is that portion which is actually planted in the uterus, and by which the supply of vessels and of nourishment is carried. It consists of arteries, veins, lymphatics, cellular, and fibrous tissue. This circumstance should be remembered, for the tendency occasionally shewn to the reproduction of these tumors after their removal by an operation, is most probably owing to some remains of the morbid growth. Thus, recapitulates M. Dupuytren, polypi may or may not have a peduncle, and this is generally dependent on the situation from which they sprout. Those which are formed in the parietes of the uterus, and those which proceed from its external surface, or indeed from its internal, provided that they receive and exhibit an investment from its fibrous texture, are deficient in a peduncle. The others, in which this part is presented, have been adequately noticed. The latter are usually known under the name of fibrous polypi; the former have been designated fibrous tumors of the uterus.*

The length of the peduncles is extremely variable; some being barely distinguishable from the tumor, and others being two or three inches long. The greater the polypus the greater is usually the elongation of the peduncle, whilst the latter becomes generally thinner as it lengthens. In an instance related by M. Dupuytren the peduncle had become so weak that it spontaneously broke. This is not a frequent accident, for powerful tractions are generally borne, in consequence of the resistance of the fibrous tissue. When the peduncle is soft and thin simple torsion will detach it, but M. Dupuytren prefers division, as less likely to leave portions of the growth behind.

The peduncle is composed of arteries, veins, lymphatics, cellular tissue, and probably of nerves. The existence of arteries, sometimes of large size, might appear to forbid, or, at least to form an argument against division. Yet the reasonable fear is dispelled by experience, and hæmorrhage is found to be extremely rare. M. Dupuytren has many times divided the peduncles of polypi in which the vessels were of considerable size, without the occurrence of hæmorrhage. The presence of lymphatics is frequently obvious, commonly to be inferred. But the nerves, if they exist, are small, and the tumor is possessed of trivial sensibility.

The size which the tumor attains is influenced, no doubt by the age and the vigour of the patient; but it is more affected by the quantum of compression exerted by the uterus. The polypi of greatest magnitude are such as are implanted in the external surface of the uterus, and grow into the abdomen where little resistance is presented to them. Upon any circumstances, great differences are noticed in the dimensions of polypi, some being as small as a grain of millet, and others weighing fifteen to thirty pounds. The largest which M. Dupuytren has witnessed was twenty-five pounds in weight, but the elder M. Gaulthier de Claubry has published an instance in which the tumor weighed thirty-nine pounds, and had acquired the vast size of thirty-five inches and a quarter in its vertical circumference, and twenty-nine inches and a quarter in its horizontal.

Previous to the occurrence of organic alteration, polypi are usually whitish, smooth, and similar in appearance to the surface of the healthy uterus. When inflamed, they become reddened, and brownish or greyish when sloughing spontaneously, or from the application of the ligature. Their consistence is in general remarkable, equal indeed to that of the intervertebral fibro cartilages. M. Dupuytren suspended a weight of several hundred pounds to some large polypi, without occasioning their laceration. They are often so elastic, as to rebound when thrown upon the ground.

---

* In this country they are commonly termed "fleshy tubercles." The nomenclature is inferior.—*Eds.*

Their form presents varieties. They are usually globular or ovoid, not unfrequently angular or uneven on the surface, and, when of any magnitude, almost always lobulated externally by fissures. M. Dupuytren has seen some resembling in figure mushrooms reversed, and others conical, with the smaller end below. Trivial as they may appear, it is useful to become acquainted with the forms that polypi assume. As an instance of the necessity of examining carefully the form of a tumor in the vagina, the lecturer relates a case in which an able surgeon pronounced the disease to be cancer. M. Dupuytren ascertained by examination, that the tumor was globular below, and surmounted by a peduncle above. He performed the operation and cured the patient.

M. Dupuytren shews that the polypus is covered by a prolongation of the mucous membrane lining the interior of the uterus. Like mucous membrane, it inflames, becomes congested, gives rise to muco-purulent discharges, and is subjected to ulceration.

Ulcers on the cervix of the uterus, and especially on the os tincæ, are frequently observed, and not unfrequently mistaken for ulcerated scirrhus. The two affections are distinguished by the redness, the irregularly rounded form, and the whitish bottom of the simple ulcer.

M. Dupuytren passes in review once more the textures and divisions that compose the polypus. We need not recapitulate the student's lesson. Yet one or two points deserve consideration. Thus, M. Dupuytren alludes to the opinion, indeed the declaration, that the peduncle exists in such polypi only as have cleared the constricted cervix of the uterus, and expanded uncompressed in the vagina. The peduncle is made to depend on pressure exerted on the portion of the tumor next the uterus. The study of facts disproves the speculation; for pedunculated polypi are found quite inclosed in the uterine cavity, and are seen to originate from different portions of the exterior of the cervix, and even from the outer surface of the uterus itself. No constriction on the stalk can be exercised in these instances.

The elements which mainly compose the polypus are the fibrous and the cellular, the latter much condensed. They are often disposed in equal ratios, but more frequently the one or the other predominates, and confers a character on the succeeding alterations. If the fibrous element is in excess, the polypus, says our author, either does not degenerate at all, or, if at length it does so, assumes an osseous form in lieu of a scirrhus one. If, however, the cellular tissue abounds, the degeneration that ensues is carcinoma; a tendency to which is constant and inevitable after a certain length of time. M. Dupuytren appears to think that inflammation forms the stage, that determines the transition to malignant alteration. We give these opinions as we find them. Perhaps they may admit of question; certainly they should not be unhesitatingly received. We do not indulge in criticism or in argument, as we wish to put our readers in possession of the facts and the opinions of the lecturer.

Whatever be the cause, the cartilaginous or osseous alteration is extremely rare; the cancerous too frequent. Out of one hundred cases, three or four examples of the former transformation are all, perhaps, that will be met with. M. Dupuytren concludes by the assertion, that not only is the existence of the cellular element operative in occasioning scirrhous change of structure, but that serum or serosity combined with the solid textures confers an additional tendency to the degeneration. The serosity, when free in the tumor, is less noxious. We repeat that we present three statements as we find them.

M. Dupuytren having disposed of the influence of tissue proceeds to remark that inflammation is another cause of alterations in the tumor, and even of malignant action. If the polypus projects into the abdominal, or rather into the pelvic cavity, peritonitis and all its consequences may ensue If the tumor is internal, and invested by the mucous membrane, metritis, and various discharges may result. In both instances malignant transformation may occur. The lecturer here insists on a distinction In spontaneous malignant action, depending upon tissue, the change commences in the centre, and extends to the circumference; but the cancerous alteration that follows, inflammation begins on the circumference and passes inwards This is also the case with the ossific alterations.

Cavities are sometimes found in the interior of the fibro-cellular tumors of the uterus. They may be either connate with the tumor itself, or consecutive in their appearance and dependent on softening or morbid alteration of its substance. Saviard and Boudon each relate a case of the former description. In 1823, the surgeons of the Hôpital Saint Louis removed a tumor the size of a child's head, which had hung for some years at the vulva of a female; on division, it presented a cavity in its interior, and resembled the uterus so closely as to lead to the opinion that that organ had been extirpated. The patient died, and the suspicion proved to be erroneous: for the uterus was untouched, and the tumor had been merely an enormous polypus. M. Dupuytren also operated upon one which contained in its centre a considerable cavity. When present, its interior may be smooth and polished, or present projecting fibrous fasciculi, similar to the columnæ carneæ of the heart. Such are the cavities originally formed in fibrous tumors.

But these which result from changes in their constitution, such as softening or degeneration, are filled with a sanious, puriform, or bloody fluid. A surgeon having applied the forceps to a very large fibrous tumor, in order to drag it down in the vagina, broke into a cavity contained in the polypus, and evacuated some dark and excessively offensive matter. The same surgeon removed a polypus from two other patients. In one tumor there were several cavities filled with clots of blood; in the other were three abscesses, containing dark matter.

The reporters term the preceding facts important and "precious," and indulge in an assertion more expressive, we conceive, of their laudable anxiety for the fame of their patron, than of the sober soundness of their judgment. They affirm that it is certain that the fibrous, cancerous, fungoid, fibro-cartilaginous, osseous, and stony growths, formerly considered distinct alterations, are in reality no other than different degrees of the same disease. And on this assumption they build the pleasing but infirm belief, that in all these instances an early operation will prevent the return of the complaint. It is generally thought, perhaps admitted, that morbid growths, not malignant in their origin, may, in process of time, and from various causes, assume a malignant disposition. But the bold idea that many kinds of morbid alteration, some malignant and some not so, have a common and a non-malignant stock, is calculated to awake the scepticism of the cautious

The exact reasoner asks for proofs, and will not be contented with a chain of reasoning, which, however ingenious, is manifestly inconclusive. M. Dupuytren affects to argue rigorously, he constantly appeals to facts, and his lectures wear a syllogistic habit. Yet it cannot be concealed that, in this instance, he has ventured on some positive yet doubtful affirmations, without attempting substantial proofs.

The succeeding doctrine is equally startling and still more dubious than the last. It is this.

If the tumors are removed at an early period, before "degeneration" commences, a return of the disease is seldom noticed; but if, on the contrary, "degeneration" has begun, a recurrence may be apprehended. So far so good; but the rationale offered by the Baron is debateable. He says that in the first instance, the investing tissue continuous with and a production of the mucous membrane of the uterus, confines within its limits the disease, and operates as a barrier against its extension to the surrounding textures. When degeneration has attacked the tumor, the investing tissue is itself affected, and the morbid action is disseminated throughout the neighbouring parts. Whilst the morbid growth is circumscribed and thus encysted, its total removal is not difficult. But when it has spread to the surrounding parts, its satisfactory extirpation is impossible.

When we look back on the preceding statements, we discover some bold and magisterial assumptions, unsupported by any thing like reasonable proof. It is an assumption to state that the various morbid growths and morbid alterations of structure of the uterus have a common origin in fibro-cellular productions; it is an assumption to state, or even to imply, that the disease is not cancerous so long as its investing tunic is entire, or, being cancerous, that it does not, so long, contaminate the system. We will not further argue the question than by merely stating that these are assumptions, not merely devoid of proof, but of probability. It appears to us that M. Dupuytren has unphilosophically confounded many diseases of the uterus; and that his cancerous degeneration of fibro-cellular tumors is a mere misnomer of several malignant diseases of the uterus, which never in any stage approached the description or character of polypi. We proceed to another subject—the frequency of fibro-cellular tumors of the uterus.

They were formerly thought to be uncommon. Levret was occupied for seven years in collecting three cases to which he might apply his mode of treatment. A Dutch professor who had never seen an instance of the malady, denied that his country-women were liable to be affected with it. The disease, in point of fact, is frequent. Bayle calculates that, out of every fifty women above the age of thirty-five, one has fibro-cellular tumors of the uterus; such, at least, was the proportion of cases that occurred to him. Portal, in 1770, recorded or obtained a larger proportion. Of twenty uteri which he examined, thirteen contained polypi in their interior.

M. Dupuytren believes that the uterus of women advanced in life is very seldom free from them.

M. Dupuytren considers with reluctance and quits with dispatch the causes which give rise to these productions. Those causes are obscure and indeterminate. But it is certain that persons between the ages of forty and fifty are those who most frequently present them. The influence of celibacy or sterility is doubtful.

The reporters refer to sixty-two cases, of which they have collected and analysed the particulars. The points which they attempt to illustrate are the age at which the disease appears—the influence of marriage—the effects of sterility—and the condition of the menstruation.

A. It is manifestly difficult to ascertain the age at which a polypus commences. The nearest approach to the truth which can be made, is probably, to determine the period at which the symptoms were developed. In five of the sixty-two cases collected, this period is not mentioned. Of the fifty-seven which remain, they appeared—

| | |
|---|---|
| In 1 patient between | 15 and 20 years. |
| 10 - - - - - - - | 20 and 29 |
| 19 - - - - - - - | 30 and 39 |
| 23 - - - - - - - | 40 and 49 |
| 3 - - - - - - - | 50 and 59 |
| 1 - - - - - - - | 60 and upwards. |

Thus in the majority the disease was manifested between the age of 40 and 50; whilst 30 to 40 furnished the second proportion. A closer consideration of the individual cases shewed that from 35 to 45 or 48 was the period of life most prone to the complaint.

B. The action of marriage and results of celibacy are interesting, indeed important. Marriage must in this case be viewed through the glass of the philosopher, rather than that of the divine; for physiologically, those who have enjoyed the act of coition must be looked upon as married.

Of the 62 patients, the chastity or otherwise of four is net recorded.

Of the other 58, 54 were, medically speaking married.

And, four were single and considered chaste.

C. The determination of chastity is difficult. The fact of sterility, though not always to be ascertained, may generally be so. Of the 62 patients, four, being chaste, may of course be set aside; and seven exhibit no satisfactory evidence upon the subject. The gross number is therefore reduced to 51. Of these there were—

| | | |
|---|---|---|
| Wives having had 1 to 10 children - - - | 39 | 42 |
| Unmarried girls with children - - - - | 3 | |
| Wives with no children - - - - - - - - | 8 | 9 |
| Girls, not maids, without children - - - | 1 | |

Of the wives who had borne children, the greater number had had more than 3, many more than 5, and some so many as 7, 8, and 10.

D. The condition of the menstrual secretion is to be examined. Of the 62 patients—

41 were regular up to the development of the disease.

5 were not regular for seven years prior to the first symptoms

6 had never been regular at any time.

1, aged 48, had been regular but had suffered under leucorrhœa from the age of 18. She had borne, notwithstanding, 6 children.

9 afford no information on the subject.

The reporters well observe that the condition of the menstruation proves little; for irregular catamenia are more likely to depend on polypus or on its cause, than the latter are to arise from *it*.

This careful induction from recorded facts, an induction that may be in some respects fallacious, because those facts may not be strictly accurate, is scarcely illustrated by the brief remarks of Dugès and Boivin. Their section on the predisposing causes of polypi is concise, indeed imperfect. They attribute much to the lymphatic temperament—something to the catamenia.

"We have already remarked," they say, "that the lymphatic temperament is probably one of the principal predisposing causes of albuginous or fibrous tumors of the uterus; we may make the same observation with respect to polypi; but we have sometimes observed a coincidence, worthy of remark, between the existence of polypus attended with profuse discharge by the vagina, and cancer of the mammæ, the liver, or even the face. Perhaps this affection operated only like other debilitating causes, under the influence of which pediculated tumors of the uterus arise. We have, in fact, observed that this disease attacks principally the weak, those who live in low, damp places, and persons of sedentary habits; that it has been preceded by leucorrhœa, and that the catamenia had appeared early and in abundance. In several instances, this flow had been accompanied with membraniform growths; or abortions had taken place, attended with difficult and slow expulsion of the fœtal appendages: all which circumstances might bring on, or manifest, congestion, and habitual, or frequently recurring, inflammatory state of the uterus. It is also at the age and under the particular circumstances in which this congestion usually occurs, that these excrescences appear; seldom observed in the case of the very young,* and still less in the unmarried,† they are equally rare after the cessation of the catamenia, and they are most commonly discovered in cases in which parturition has taken place one or more times, though their origin cannot generally be attributed to any decided local cause." 199.

It must be owned that the causes of polypi of the uterus are concealed in impenetrable darkness. The investigations of pathology have failed, and the study of facts has but slightly contributed to elucidate the subject. The faint and glimmering light of observation amounts, it would seem, to little more than this—that the married and the aged are more subject to the malady than virginity and youth; in other words, that employment and excitement of the organ predispose to the formation of the morbid growth. Unsatisfactory as this small amount of knowledge must be, it is as great as that which we possess in the instance of scirrhus, of fatty tumor, or of other morbid alterations of structure.

On the symptoms of polypus of the uterus we will not dwell, as the common works on midwifery contain the information presented by our authors. We will content ourselves with the remark, that the symptoms vary in some degree with three various situations of the polypus;—within the uterus—at its neck, which is dilating—and in the vagina, after the cervix has dilated. But the experience and the injunctions of M. Dupuytren, on the mode and the results of examination with the finger, are not undeserving of attention.

---

* Pfaff describes a case of polypus which occurred in a female child of two years old. The ligature was applied thrice; and thrice the tumour returned; it was eventually and permanently removed by the forceps; the operation was followed by retention of urine and swelling of the abdomen, which soon subsided.—Richter, Bib. Chir. v. vi., p. 538.—Tr."

† "Siebold has observed three existing at the same time in the case of person in whom the hymen was perfect.—(*Simson*, p. 22.)"

That examination is available in the two latter stages of polypus—when presenting at the uterine orifice, or actually in the vagina.

When the polypus appears at the uterine orifice, the finger distinguishes a rounded, smooth tumor, usually firm, yet of variable consistence. It is not always easy to decide whether this be a polypus, or thickening of the cervix of the uterus, or, supposing its polypoid nature determined, whether it arises from the border, or the interior of the cervix, or the cavity of the uterus itself. If the cervix is not sufficiently dilated to permit the introduction of the finger, a mistake is easily committed.

*Case.* A young lady, æt. 22, came to Paris from the Provinces, in order to consult two eminent physicians, on account of an uterine disorder. They looked on it as thickening of the uterus, and treated her for that complaint for the period of two months. A celebrated surgeon, M. Dupuytren we suppose, was then consulted. He was told that a remarkable symptom existed—the occurrence of labour-pains every day at the same hour. This awakened his suspicions of the existence of some tumor in the cavity of the uterus. He examined with the finger whilst the patient reclined; but without a satisfactory result. He repeated the examination when she was erect; the os uteri dilated to the size of a franc piece, and the fore-finger passed into it discovered a firm substance, which appeared to be continuous with the parietes of the cervix. The result was still unsatifactory. But on a subsequent occasion, the surgeon thrust on the finger with some force, and, with difficulty, penetrated into the interior of the uterus. He recognised a large and circumscribed tumor, and pronounced on the existence of a polypus. The diagnosis was ineffectual, for peritonitis carried off the patient in a few days after its announcement. The case was proved to be one of fibrous polypus.

If one examination is unequal to the task of determining the nature of the tumor at the os uteri, several should be practised, and the surgeon should attempt to introduce the finger within the cervix, to circumscribe the tumor, and even to ascertain its seat. M. Dupuytren recommends us to make the attempt, but he does not recommend the gentleness and caution which every prudent surgeon would practise, in order to avoid such fatal consequences as occurred in the case we have just related. The tumor may adhere from inflammation to the sides of the os uteri—or the tumor may grow from the parietes of this or of the uterus itself: in either case the diagnosis is difficult, and the fact should always be remembered. When the polypus springs from the free margin of the os uteri, the remainder of that margin is felt unoccupied, and the cavity of the cervix is not filled.

In the third stage of the tumor, when it has descended into the vagina, it is easily recognised, if of moderate size. If it fills the vaginal cavity, the recognition is more difficult. The finger should, of course, attempt to pass round the polypus and above its body to the neck. If the latter, or constricted portion, is felt to be surrounded by the cervix of the uterus, the polypus evidently issues from that organ: if the orifice is open, and one of its lips continuous with the pedicle, this demonstrates that the polypus grows from the os uteri.

The tumor from its form, or from its bulk, may prevent the finger from reaching its pedicle. When this is the case, M. Dupuytren recommends the adoption of Levret's advice—to seize the tumor with the forceps and drag it down to the vulva; performing at the same time the diagnosis and the operation. A case is related, in which the tumor was so large as to prevent an examination of the ordinary kind from arriving at its pedicle. The following method succeeded. The surgeon placed himself on the left side of the patient, and introduced the forefinger of the left hand between the right side of the tumor and the vagina; ascertaining by this means that the right side of the cervix uteri was free. He repeated this process with the opposite hand for the opposite side, and arrived at a knowledge of the relations of the polypus. M. Dupuytren found that he was only capable of succeeding in this manner. We may observe that, in performing the operation, it was necessary to divide to the extent of half an inch the posterior commissure of the perineum.

When the tumor has cleared the vulva, the diagnosis is generally easy. Yet sometimes it is difficult to determine from what part the pedicle springs, or where the uterus begins. A case in point is detailed by the Baron, who notwithstanding operated with success.

The speculum is useful when the polypus is small. By means of it, M. Dupuytren detected the existence of a great number of small, red, vascular polypi, clustered like a bunch of grapes, and filling the cervix uteri, in a female aged 30, whose case had been mistaken by many medical men.

It must be owned, however, that the diagnosis of polypi is sometimes very difficult, and that errors are not unfrequently committed by experienced men. A case of this description is related. The memory of most surgeons and physicians will probably present such cases to their minds. We should mention a circumstance important to the practical man. Polypi sometimes pass through the uterine orifice suddenly, during the action of the bowels for example. I have known, says Dr. Gooch, several instances in which patients, after this action, have been suddenly seized with retention of urine, and, on examination, a polypus was found in the vagina compressing the urethra. Independently of the possible suddenness of its descent, the surgeon must recollect that a polypus *does* descend—that at one time it is in the uterus, and subsequently in the vagina. What we mean is this:—that a surgeon may examine a patient carefully to-day and discover no polypus, whilst another practitioner examining the same female, in a few days or a week, may find it in the vagina. If the general symptoms of populus are present, the prudent surgeon will guard his reputation by informing his patient, that although no tumor can be ascertained now, it may be felt at some future time. We lately heard of an instance of this sort. A surgeon attended a lady for symptoms resembling those of polypus. But he could find none, and, concluding that malignant disease of the uterus existed, he cautioned her against hoping any thing from an operation. Soon afterwards she consulted another gentleman, who discovered a polypus in the vagina, operated, and was successful. The first surgeon was wrong, perhaps from ignorance, perhaps from negligence. But his ignorance might have been veiled, had he prudently remembered, and dexterously hinted the circumstance we have alluded to.

Dugés and Boivin advert to the rare occurrence of sanguineous polypi, which become gorged with blood at the epoch of the catamenia. The translator appends a short note to the passage in which this is mentioned. A case of this kind, he says, is given in the Bib. Medicale, v. xxxix. p. 235.

The volume of the tumor was very variable; when it was gorged with blood, it descended beyond the orifice of the vagina, and was seen externally; but the loss of blood which the patient experienced each time caused it to return, and then it could only be perceived by the finger. It was in this state that it was extirpated, without any hæmorrhagy.

To revert to the lectures of M. Dupuytren. He proceeds to describe the symptoms of those fibrous tumors which are formed in the uterine parietes —of those which arise from its peritoneal surface—and, finally, of those which spring from without and around the cervix. We shall only attend to the last.

They are developed around the neck, and in the substance of the tissues encircling the uterus—they are seldom insulated, but usually numerous—are extremely common—are met with in front, behind, or on the sides of the cervix, between the vagina and the rectum, or between the vagina and urethra. The symptoms are determined by the situation, and, from the same cause, are peculiar and characteristic. In the majority of instances, an operation is impossible, but, where possible and proper, it should be performed. Many cases are detailed; we shall instance some.

*Case.* A lady consulted M. Dupuytren for general indisposition, pains in the vagina, but more especially for barrenness. He found, on examination, the cervix uteri surrounded by a sort of circle of prominent and contiguous tubercles, of a fibrous character. Suspecting the co-existence of others, he prosecuted his examination, and found a polypus situated higher on the body of the uterus.

*Case.* M. Dupuytren was consulted by the wife of a confrère. She had been examined by many medical men, who suspected many complaints, but not the right one. After several trials, M. Dupuytren detected a tumor on the right side of the cervix uteri. It increased, and an operation was proposed, but M. Dupuytren discountenanced the idea.

*Case.* A female applied to M. Dupuytren, with violent pains in the rectum. He passed the finger into the gut, and found a tumor of a conical figure external to its anterior wall; the latter not being adherent to it. The finger in the vagina at first discovered nothing, but, at length, the tumor was found to proceed from the posterior surface of the cervix uteri, and to pass between the vaginal and rectal parietes.

*Case.* Another patient had a tumor on the anterior and lateral surface of the cervix. It pressed on the bas-fond of the bladder, occasioning much distress, and a frequent desire to make water.

*Case.* And another female had the tumor placed between the cervix uteri, the bas-fond of the bladder, and the posterior surface of the urethra. She had frequent desire to make water, in consequence of the pressure on the bladder, yet suffered from retention, the effect of compression of the urethra.

With respect to the prognosis, we see nothing in either of the works before us which demands a special notice. The experience of Dugés and Boivin, on one point, is worth recording.

> "There are numerous cases which prove that sterility is not an inevitable result of this disease: we, with others, have had occasion, however, to observe that pregnancy may not proceed to its usual period; and abortion, in this case, has been sometimes serious, and even fatal. In other cases no serious result has occurred beyond that of common abortion. The same remarks may be made respecting pregnancy proceeding to its full time; delivery may take place naturally, though there are instances in which hæmorrhagy, or other consequences, have proved serious, or even fatal." 209.

The consideration of the symptoms will render much reference to the remarks of the authors on diagnosis needless. The only point which we think it advisable to notice is the mode, and sometimes the difficulty, of distinguishing between polypus and inversion of the uterus. We shall venture to extract the observations of Dugés and Boivin upon this head. They are lengthened, but useful.

> "But the affection most liable to mislead the practitioner is that of introversio uteri. Levret says, in his memoir (art. 1 er), that it is necessary to read the curious cases in which polypi have been removed by the ligature or excision, and mistaken for the inverted uterus. We have already spoken of hollow polypi which have particularly occasioned this confusion, and we have also said (inversion) that some practitioners have been so far deceived in this respect, as to maintain that the uterus had been extirpated, although the catamenia had re-appeared afterwards, and the patient had even become pregnant. We have also observed that, in some cases, the ligature or knife has been injudiciously applied to the uterus, from the impression that the tumor was polypus. There are several symptoms and circumstances discoverable on examination, which, in fact, apply to both these affections; such as hæmorrhagy, mucous discharges, draggings, the form and situation of the tumor: the sources of their diagnosis are as follow.
>
> We must first notice the events which marked the origin of inversion at the very moment of delivery, and which we have detailed in one of the preceding chapters. If at this early stage, of inversion, in the first degree, the existence of polypus be suspected, it may be easily ascertained, on external examination, that the rounded tumor, felt by the finger in the os uteri, exactly corresponds with a similar depression of the fundus of the uterus; and simple reduction would, in most cases, remove all doubt. But when the affection has been of longer continuance, and the tumor has passed through the os uteri into the upper part of the vagina, the diagnosis may present greater difficulties: it will, nevertheless be right to consider—1, that it is only in cases in which the polypus has descended almost to the os externum, that the fundus uteri has been so far depressed as to be no longer felt upon examination by the hypogastrium, and may even then be reached by forcing back the polypus into the vagina: 2. that the fundus uteri is of a rounded form; or, if depressed, not proportionably so with the sinking of the tumor in the pelvis; 3, that this latter tumor, being fairly examined between the fingers placed above the pubes and those introduced into the vagina, is much larger (twice as large at least) than the uterus, as ascertained at the same time. Leaving these conjectures, however, it might be ascertained, by the finger on the elastic catheter, that the inverted uterus is encircled at its neck with a cul-de-sac of little or no depth; whilst in a case of polypus, the sound will be carried very far along its pedicle, beyond the os uteri through which it had passed. We will just add that the consistence of the uterus is usually softer, allowing it to become rugous and furrowed longitudinally, in consequence of the cavity in its centre;—remarks which may therefore apply

to the hollow polypus. These polypi, indeed, generally filled with fluid are liable to evacuate their contents at intervals by some fistulous orifice, frequently inducing considerable changes in their form and consistence. We shall not dwell upon the deep colour and ecchymoses of the uterus, because polypi also present numerous appearances of this kind ; but we may observe, with Levret and others, that the uterus is painful and tender to the touch, while polypus, when touched, scratched, or pricked, remains insensible.

A voluminous polypus, protruding from the os externum, may easily be distinguished from inversion of the last degree ; its pedicle is found to be contracted and solid, and encircled to some depth by the vagina ; while the base of the inverted uterus is large, soft, containing a portion of the rectum and of the bladder, together with the matter collected in those organs. This base, constituting the parietes of the vagina, itself inverted, is continuous with the borders of the os externum, and the finger cannot be pressed deeply into any point of its contour." 206.

M. Dupuytren passes successively in review cauterization, torsion, crushing, tearing away, and ligature, as modes of removing polypi. But these may be disregarded, for the purpose of ascertaining the practice preferred and adopted by himself. It is excision.

In order to apply, or rather to shew how M. Dupuytren applies this, the reporters retrace their steps, and occupy themselves again in distinguishing the various species of these tumors. Yet we think that the tedious recapitulation may be spared. We shall suppose that the polypus is contained in the cavity of the uterus, and that the finger is capable of ascertaining its existence there. The question arises—what are the indications for an operation? what the period for its performance?

Those questions may receive the general reply—that urgent symptoms can alone demand, or even justify it. Profuse and exhausting bloody discharges, commencing degeneration of the tumor, and sufferings that seriously impair the health, are the usual signs indicative of its propriety.

We will imagine that these or other circumstances call for interference on the surgeon's part. The mode of operating must occupy his attention. The state of the os uteri must, of course, be ascertained. If sufficiently dilated, M. Dupuytren approves of the exhibition of the ergot of rye, provided there is reason to believe that the polypus is of the pediculated kind.

*Case.* M. Guersent, jun. was called to see a female, who was suffering from pains in the abdomen, groins, uterus, &c. accompanied with hæmorrhage from the vagina. On examination, he found the os uteri dilated, and distinguished in the uterus a round smooth body, which he readily ascertained to be a fibrous tumor. Thinking that the os uteri would permit the passage of the tumor through it, he presribed the ergot of rye. The uterus contracted, and propelled the polypus into the vagina, where it was conveniently placed for an operation.

If the os uteri is little or not at all dilated, mechanical dilatation has been recommended and employed. M. Dupuytren relates a case in which it was adopted.

*Case.* Some years ago, M. Dupuytren was summoned in great haste to a lady, who was almost in extremis. He learnt that she had been labouring under polypus of the uterus, that it had presented at the cervix, that the os uteri had not enlarged sufficiently to permit the passage of the polypus, and that attempts had in consequence been made to dilate it by means of sponges and prepared gentian root. These measures had given rise to intense peritonitis, for which M. Dupuytren's attendance was demanded.

This case, and considerations which it illustrates and strengthens, induce M. Dupuytren to discountenance altogether mechanical dilatation of the os uteri.

The ergot of rye has been recommended where the os uteri is sufficiently open. Yet it frequently will fail, for the cervix is not, as in pregnancy, softened and attenuated, and gradually stretched. In cases of polypus it preserves its thickness, nay, chronic inflammation may augment the latter, and its great rigidity offers an invincible obstacle to success. When this is the case, M. Dupuytren divides the cervix by incision, a method which he has frequently adopted with success. After this has been done, the ergot acts in a satisfactory manner.

Division of the cervix may be effected in two ways:—by division from within outwards with the probe-pointed bistory or bistoire cachée: or, by division from without inwards, with the sharp-pointed bistoury thrust through the cervix. M. Dupuytren assures us that this operation has proved in his hands the means of cure, in cases considered beyond the reach of art.

After incision of the neck and dilatation of the os uteri, the hooked forceps of Museux should be applied to the tumor, and the latter drawn down by its assistance. In many cases this is impossible, at least to an adequate extent. M. Dupuytren advises us, under these circumstances, to drag the uterus to the lower outlet, and effect its "demi-renversement." If this again is unattainable, the cervix should be incised more freely, and the tumor cut out from the uterine cavity. The indications are the same when the pedicle of a polypus which has passed into the vagina is so closely encircled by the cervix that it is not possible to divide it above the os tincæ. Such are the recommendations, such apparently the practice of M. Dupuytren. Yet the former would appear to the cautious English surgeon to be injudicious—the latter to be hazardous and rash. The following case was notwithstanding a successful one.

*Case.* A milliner, æt 49, was received in the Hôtel Dieu in December, 1823, on account of a large polypus which projected between the labia. It was red, hard, and ulcerated in several situations. The finger introduced into the vagina could be easily passed round the pedicle of the tumor, which was forcibly grasped by the cervix of the uterus. M. Dupuytren removed the polypus on the 13th of the month. He seized and dragged it out of the vagina by the hooked forceps of Museux, applying fresh as the tumor descended lower and lower till the neck of the uterus appeared at the vulva. The pedicle was then found to be grasped by it too tightly to permit the section above it. M. Dupuytren, therefore, divided the cervix from within outwards with the probe-pointed bistoury, and then, with curved scissors, cut through the pedicle within the uterus. No hæmorrhage succeeded, the uterus reascended into the vagina, and the patient recovered without the supervention of symptoms of material consequence.

When the polypus has descended into the vagina, the operation of excision is in many cases simple. But the following circumstances may occasion difficulties.

1. Sometimes the uterus is depressed with difficulty, or the polypus from other causes refuses to descend, and its pedicle cannot be brought out at the vulva. M. Dupuytren, in such a case, recommends the surgeon to divide the pedicle at its most contracted part with a bistoury, the blade of which is partially encircled by a bandage, or with proper curved scissors, the instrument being carefully guided on the fingers of the left hand in the vagina. Such a proceeding should be likewise had recourse to, if the pedicle appears incapable of sustaining the necessary traction.

2. Before the surgeon attempts to drag the polypus down, he should ascertain if it adheres to the surrounding parts. If adhesions exist, they should be carefully divided with long and strong scissors curved on the blade-plane, and with blunt edges to tear through the adhesions and the vessels they contain, rather than to cut them. The dissection is delicate, and should be carefully performed.

3. A circumstance usually accompanies the exit of the polypus from the vagina, which should be mentioned and remembered. It is this. A jet of blood takes place, as occurs in delivery, and after the abstraction of fibrous polypi from the nose. It arises no doubt from some of the vessels of the vagina. It is momentary and of little consequence.

4. Polypi are occasionally too large to admit of being drawn through the vulva. If the difficulty arises from the narrowness of that aperture, M. Dupuytren does not hesitate to divide its posterior commissure—if it depends on the magnitude of the tumour materially exceeding that of the lower pelvic out-let, the former must be crushed, or torn, or cut into fragments with the bistoury.

The preference displayed by M. Dupuytren for the knife, is evidence in itself that he does not dread and has not often met with hæmorrhage. Yet cases may occur in which, from the pulsation of or on the tumor, it might seem to contain arteries of considerable magnitude. In such cases he would recommend the application of a ligature prior to the division of the pedicle. But he does not recollect that he ever had occasion to resort to this precaution.

The polypus without a pedicle, imbedded in the tissue of the uterus, *may* require or justify an operation. *If* it does, M. Dupuytren proceeds in this manner:—he first makes a semi-elliptical incision round the anterior half of the tumor at its base. As soon as the edges of the wound retract, and the tumor becomes prominent, a similar incision is made posteriorly, the two, of course, embracing the morbid growth. The edges of both wounds retracting expose the origin of the tumor, which if seated in the cellular tissue below the mucous membrane may be turned out with the finger or the handle of the scalpal: and if placed in the inter-fibrous cellular tissue may require a few touches of the bistoury.

M. Dupuytren has sometimes met with polypi displaying an enlargement in the vagina, and one also in the uterus to which the latter is attached by a pedicle. Such polypi will frequently come under the class of those which cannot clear the os uteri, and will require the same treatment. For this we refer to a former part of the article.

The management of the patient after the operation is usually simple. As soon as the pedicle is cut the uterus rises suddenly to its proper situation in the pelvis, and the bleeding which ensues is almost always moderate and of brief duration. The discharges which existed previously immediately cease, and unless the patient was irretrievably exhausted a few days commonly restore her to health. Yet management and caution are required for a longer period, a dangerous inflammation of the uterus and peritoneum being sometimes insidiously developed. We saw a patient die with pus in the veins of the uterus, and inflammation of the peritoneum and the pelvis after the application of the ligature.

We must now conclude this article. On the whole, it may be regarded as a fair exposition of the principal fact and opinions contained in the lecture of M. Dupuytren. That lecture occupies upwards of 160 pages. Its compression into 14 is no trivial operation, facilitated though it is by the natural turgescence, diffuseness, and repetitions of French writings.

## EXPERIMENTS AND OBSERVATIONS ON THE GASTRIC JUICE, AND THE PHYSIOLOGY OF DIGESTION. By *William Beaumont*, M. D. Plattsburgh, 1833. 8vo. pp. 280.*

In our examination of the work before us, we shall endeavour to present to our readers a clear view of the facts and deductions of the author, with an occasional comment upon some of the opinions which he has advanced. We shall follow, however, a somewhat different arrangement from that adopted by Dr. Beaumont.

The subject upon which the experiments of the latter were performed, was a young man, of a good constitution, robust and healthy, who, on the 6th of June, 1822, he being then eighteen years of age, was accidentally wounded by the discharge of a musket loaded with buck-shot. The load entered his body posteriorly, and in an oblique direction, forwards and inwards, literally blowing off a portion of the integuments and muscles of the size of a man's hand, fracturing and carrying away the anterior half of the sixth rib; fracturing the fifth; lacerating the lower portion of the left lobe of the lungs and the diaphragm, and perforating the stomach. On examination, twenty-five or thirty minutes after the accident, a portion of the lung, as large as a turkey's egg, was found protruding through the exterior wound, lacerated and burnt, and immediately below this, was " another protrusion, which, on further examination, proved to be a portion of the stomach, lacerated through all its coats, and pouring out the food " that had been eaten in the morning, " through an orifice large enough to admit the forefinger."

It is unnecessary, on the present occasion, to follow out the surgical details of the accident and its treatment. For seventeen days every thing that was taken by the mouth soon passed out at the wound, and the only manner in which the patient was sustained was by nutritious injections per anum. During this period alvine evacuations could not be obtained, notwithstanding cathartic enemata were given, and various other means adopted to promote them. As soon, however, as compresses and adhesive straps could be applied over the opening into the stomach, and food was retained in the latter, by the aid of purgative injections, a very hard, black, fetid stool was procured, followed by several similar ones; after which the bowels became quite regular, and continued so.

> " No sickness, nor unusual irritation of the stomach, not even the slightest nausea, was manifest during the whole time; and after the fourth week, the appetite became good, digestion regular, the alvine evacuations natural, and all the functions of the system perfect and healthy.
>
> By the adhesions of the sides of the protruded portions of the stomach to the pleura costalis and the external wound, a free exit was afforded to the contents of that organ, and effusion into the abdominal cavity was thereby prevented."

Cicatrization and contraction of the external wound commenced in the fifth week; the stomach became more firmly attached to the pleura, but the orifice still remained open. This resembled, in every thing but the absence of a sphincter, the natural anus, with a slight prolapsus. At every dressing it allowed the contents of the stomach to flow out, in proportion to the quantity recently taken, and when the stomach was empty, or nearly so, a partial invertion would take place, unless prevented by the application of the finger.

---

* Not having been able to procure a copy of Dr. Beaumont's work in time for this Number of the Journal, we have transferred to our columns an admirable analysis of it from a recent Number of our esteemed transatlantic contemporary, the " AMERICAN JOURNAL of the MEDICAL SCIENCES," under the conviction that we could not offer our readers a more instructive article or a more acceptable present. We have only omitted a few introductory criticisms not essential to the analysis or to the strictures of the reviewer.

"Frequently, in consequence of the derangement of the dressing, the inverted part would be found of the size of a hen's egg. No difficulty, however, was experienced in reducing it by gentle pressure with the finger, or a sponge wet with cold water, neither of which produced the least pain.

In the seventh week—the circumference of the external wound was at least twelve inches, and the orifice in the stomach nearly in the centre, two inches below the left nipple, in a line drawn from this to the point of the left ilium."

The food and drink taken into the stomach were prevented from escaping through the perforation by a compress and tent of linen kept on by adhesive strips.

By the sixth of June, 1823, one year from the occurrence of the accident, the injured parts were all sound and firmly cicatrized, with the exception of the perforation leading into the stomach, which was about two and a half inches in circumference. From this time the patient continued gradually to improve in health and strength, and the newly-formed integuments became more and more firm.

"At the point where the lacerated edges of the muscular coat of the stomach and intercostal muscles met, and united with the cutis vera, the *cuticle* of the external surface, and the *mucous membrane* of the stomach *approached* each other very nearly. They did not unite like those of the lips, nose, &c. but left an intermediate marginal space, of appreciable breadth, completely surrounding the aperture. This space is about a line wide, and the cutis and nervous papillæ are unprotected, and as sensible and irritable as a blistered surface abraded of the cuticle. This condition of the aperture still continues, and constitutes the principal and almost only cause of pain or distress experienced from the continuance of the aperture, the introduction of instruments, &c. in the experiments, or the exudation of fluids from the gastric cavity."

Compresses and bandages were constantly demanded, to prevent the escape of the food from the stomach, until the winter of 1823-4; at this period a small fold or doubling of the inner coats of the stomach appeared, forming at the superior margin of the orifice, slightly protruding, and increasing in size until it filled the aperture. This valvular formation adapted itself to the opening into the stomach, so as completely to prevent the efflux of the gastric contents when the stomach is full, but was easily depressed by the finger. When the stomach is empty it plays up and down simultaneously with the respiratory muscles.

In the spring of 1824 the individual had perfectly recovered his natural health and strength. The aperture in the stomach still remained, but the surrounding wound was firmly cicatrized to its edges. From this period to the present time he has enjoyed general good health. He has been active, athletic, and vigorous, exercising, eating and drinking like other healthy and active people. For the last four months, (of the autumn of 1833,) he has been unusually plethoric and robust, though constantly subjected to a continued series of experiments on the interior of the stomach; allowing to be introduced or taken out, at the aperture, different kinds of food, drinks, various instruments, and the different contents of the stomach, almost daily, and sometimes hourly.

The perforation through the coats of the stomach is situated about three inches to the left of the cardia, near the left superior termination of the great curvature. On pressing down the valve when the stomach is full, the contents flow out copiously.

"When the stomach is nearly empty and quiescent, the interior of its cavity may be examined to the depth of five or six inches if kept distended by artificial means; and the food and drinks may be seen entering, if swallowed at this time, through the ring of the œsophagus. When entirely empty, the stomach contracts upon itself, and sometimes forces the valve through the orifice, together with an additional portion of the mucous membrane, which becomes completely inverted, forming a tumour as large as a hen's egg. After lying on the left side, and sleeping a few hours, a still larger portion protrudes, and spreads out over the external integuments, five or six inches in circumference, fairly exhibiting the natural rugæ, villous membrane, and mucous coat (?) lining the gastric cavity. This appearance is almost invariably exhibited in the morning, before rising from bed."

Dr. Beaumont commenced his first series of experiments in May, 1825; in the month of August ensuing, the young man, upon whom they were performed, returned to Canada, of which place he was a native, where he remained four years. In August, 1829, he came again to the United States, and entered into the service of Dr. B. when the latter commenced a second series of experiments, and continued them uninterruptedly until March, 1831. Soon after this period circumstances made it expedient for the subject of the experiments to return with his family, again to Canada. In November, 1832, he once more came back and engaged himself to Dr. B. for twelve months, for the express purpose of submitting to another series of experiments, which were performed on him at Washington, and continued to March, 1833. In July of the same year, a fourth series of experiments were commenced at Plattsburgh, New York, and completed on the 1st of November, 1833.

"The usual method of extracting the gastric juice, for experiment, is by placing the subject on his right side, depressing the valve within the aperture, introducing a gum-elastic tube, of the size of a large quill, five or six inches into the stomach, and then turning him on the left side, until the orifice becomes dependent.

On introducing the tube, the fluid soon begins to flow, first by drops, then in an interrupted, and sometimes in a short continuous stream—Moving the tube about, up and down, or backwards and forwards, increases the discharge. The quantity of fluid ordinarily obtained is from four drachms to one and a half or two ounces, varying with the circumstances and condition of the stomach. Its extraction is generally attended by that peculiar sensation at the pit of the stomach, termed sinking, with some degree of faintness, which renders it necessary to stop the operation. The usual time of extracting the juice is early in the morning, before eating, when the stomach is empty and clean."

The fluid obtained in this manner, when unmixed with any thing excepting a portion of the mucus of the stomach, with which it is perhaps always combined, is clear and transparent, inodorous, a little saltish, and very perceptibly acid to the taste; having the flavour, when applied to the tongue, of thin mucilage slightly acidulated with muriatic acid. It is readily diffusible in water, wine, or spirits; slightly effervesces upon the addition of alkalies; possesses the property of coagulating albumen in an eminent degree; is powerfully antiseptic, checking the putrefaction of meat, and effectually restoring the healthy action when applied to old, fœtid sores, and foul ulcerating surfaces. When not separated by filtering, the mucus combined with the fluid, gives to it a degree of ropiness, but soon falls to the bottom in loose white flocculi. Saliva imparts to the gastric fluid an azure tinge and frothy appearance.

Equal parts of the gastric fluid and alcohol, mixed together and agitated, produced a turbid, milk-white fluid, upon the surface of which, after standing at rest, was formed a thin white coat of fine loose coagula. When the alcohol was first added to the fluid, and before the two were mixed by agitation, the latter settled to the bottom while the alcohol remained on the top, indicating that its specific gravity was less than that of the fluid.

The sensible properties of the gastric fluid are changed by a variety of circumstances; as by the admixture of saliva, water, mucus, and occasionally bile, perhaps, also, pancreatic juice. Derangement of the digestive organs, slight febrile excitement, fright, or any sudden emotion of the mind, occasions, also, material alterations in its appearance. Excess in eating causes a rancid state of the fluid, by which its solvent action is retarded. Dr. Beaumont conceives, however, that the special solvent itself—*the gastric juice*—is, probably, "invariably the same substance." The correctness of this latter opinion, the experiments before us are far, however, from establishing. It would be an interesting inquiry, which we are somewhat surprised Dr. B. has never thought of instituting, to ascertain whether the composition of the gastric juice is not varied according to the kind of aliment to which the individual is confined. According to MM. Chaussier, Virey, Pinel, and Voisin, the properties of the solvent fluid secreted by the stomach differ in different classes of animals, and in the human subject at different periods, and that this difference has a direct relation to the nature of the food. The first mentioned gentleman states, that its acidity is the greatest in herbivorous animals, the least in the carnivorous.

In regard to the composition of the gastric fluid, a portion examined by Professors Dunglison and Emmett was found to contain free *hydrochloric* and *acetic* acids, *phosphates* and *hydrochlorates*, with bases of *potassa*, *soda*, *magnesia*, and *lime*, and an animal matter soluble in cold water, but insoluble in hot. The existence of free *hydrochloric* acid in the gastric fluid was also evinced in the portion examined by Professor Silliman; in all other respects, however, the analysis of the latter gentleman is any thing but satisfactory.

The result of Professors Dunglison and Emmett's analysis corresponds very nearly with that of Tiedemann and Gmelin, who found the gastric fluid to contain, besides mucus, osmazome, and salivary matter, hydrochloric and acetic acids, alkaline sulphates and hydrochlorates, the alkali being chiefly soda; phosphate and muriate of lime and other salts in minute proportions.

Leuret and Lassaigne state the component parts of gastric juice to be water, hydrochlorate of ammonia, chloride of sodium, mucus, an animal principle soluble in water, phosphate of lime and lactic acid; they deny, however, the existence in it of free hydrochloric acid.

Now, as the lactic acid of Leuret and Lassaigne has been shewn by Berzelius to be merely a variety of the acetic, the existence of the latter in gastric juice may be considered as settled; while the researches of Prout, Children, Graves, Tiedemann and Gmelin, borne out as they are by the analysis of Dunglison, Emmet, and Silliman, establish likewise, we conceive, beyond the possibility of doubt, the presence of the hydrochloric acid in a free state.

The solvent power of the gastric juice, in relation to which so much doubt and uncertainty have heretofore existed, is proved in the most conclusive manner by Dr. Beaumont. It can never again become a subject of dispute. Almost every variety of alimentary matter, whether animal or vegetable, when submitted to the action of the fluid taken from the stomach, and kept at a temperature of about 100° Fahrenheit, was found to become, in a few hours, completely softened and reduced to a paste, resembling very nearly the contents of the stomach a short period after the same kinds of aliment had been eaten. The rapidity with which the substances were dissolved by the gastric fluid out of the body, was always in proportion to the purity of the fluid, and the tenderness of fibre and state of minute division of the substances submitted to its action. Milk and liquid albumen were found invariably to be first coagulated by the gastric fluid and then dissolved. The solution of only a certain proportion of any given aliment was effected by a certain quantity of gastric juice. Thus it was found, in many experiments, that the articles submitted to the action of the fluid taken from the stomach became softened or dissolved to a certain extent, when all further change would cease; but when more gastric juice was added, the process of solution would again commence. Cold gastric juice was found to be almost entirely inert. In one experiment, a piece of roasted beef was submitted to the action of the fluid placed in the open air at a temperature of 34°; after 24 hours it was not in the least dissolved. The temperature of the fluid being now raised to 100°, the process of solution commenced and advanced regularly.

A curious fact is shown by the experiments of Dr. B., that food, namely, taken from the stomach a short time after it has been eaten and thoroughly mixed with the gastric juice, will become completely dissolved, provided it be kept at a temperature of 100°.

Dr. B. has found that the gastric fluid undergoes little or no change when kept in vials for a length of time. On the 1st of November, 1833, he added to one ounce of the fluid taken from the stomach eleven months before, and which was as pure as when first extracted, thirty grains of lean mutton, boiled and masticated. The whole being placed in the axilla for six hours, sixteen grains of the meat became dissolved; the solution presenting the usual appearance of chyme.

The period, as well as the quantity of gastric juice required for the solution of different alimentary substances out of the body varied, as we have already remarked, according to the density of their texture, and their state of division. Sago and tapioca, boiled, were dissolved completely in about three hours and 15 minutes; fresh wheat bread in 4 h. 30 min.; milk, boiled, in 4 h. 15 min.; unboiled, in 4 h. 45 min.; gelatine, boiled, in 4 h. 45 min.; hard-boiled eggs, in 8 h.; soft-boiled, in 6 h. 30 min.; oysters, raw and entire, in 7 h. 30 min.; stewed, in 8 h. 25 min.; beefsteak, in 8 h.; boiled beef, in 9 h. 30 min.; raw pork, in 8 h. 30 min.; fresh mutton, boiled, in 8 h. 30 min.; beef suet, boiled and entire, in 12 h.; mutton suet, boiled and divided, 10 h.; cream, 25 h. 30 min.; olive oil, 60 h.; apples, raw and entire, 18 h.; masticated, 8 h. 30 min.; turnips, boiled and entire, 13 h. 15 min.; raw, 18 h.; boiled potatoes, entire, 14 h.; mashed, 8h. 30 min.; boiled parsnips, mashed, 6 h. 45 min.; entire, 13 h. 15 min.; raw and entire, 16 h.; raw cabbage, masticated, 12 h. 30 min.; boiled, 20 h.; mellow peach, cut small, 10 h.; mashed 6 h. An entire portion of boiled tendon required 24 h. for its solution; when masticated, 12 h. 45 min.; a portion of boiled cartilage, divided, 12 h.; masticated, 10 h.; and a solid piece of bone, boiled, 80 h. In the above experiments the quantity of gastric juice employed was one ounce nearly to a drachm of the article submitted to its action.

By the above statement it will be seen that fat and oily food was among the articles which presented the greatest resistance to the solvent powers of the gastric fluid; this Dr. B. found to be invariably the case, as well in the stomach as out of it. Some of his experiments would seem to indicate that the digestibility of this species of food is facilitated by a slight admixture of bile with the gastric juice, and that, very generally, when aliment containing any quantity of fat is eaten, bile is very generally found in the cavity of the stomach.

We felt extremely desirous of comparing the observations of our author in relation to the changes produced in the healthy process of digestion, upon the different alimentary substances, with those of Tiedemann and Gmelin, by whom this subject has been examined with uncommon care and minuteness; but the want of precision in the description given of those changes by the former, and the entire absence of any thing like chemical analysis, prevent this from being done in a manner calculated to lead to satisfactory results. Taking, however, the articles albumen, gelatine, new cheese and bone, we shall give first the observations of the German experimenters, and then subjoin those of Dr. Beaumont.

Tiedemann and Gmelin found, that in the natural process of digestion, *liquid* *albumen* forms a homogeneous fluid, in which the albumen remains entirely unchanged; this species of chyme, they remark, passes the pylorus more rapidly than any other. *Coagulated albumen* they found to be much more slowly dissolved; the fluid formed possessing the properties of coagulated albumen dissolved in acetic acid.

*Gelatine* they found to be converted into a clear brownish fluid, in which neither gelatine or albumen could be discovered.

*New cheese*, according to these gentlemen, forms an opaque, dirty white fluid, which contains much animal matter, which is neither casein, gelatine, nor albumen.

*Bones*, in their experiments, formed a liquid, which contained not only animal matter, but also a large amount of lime.

The following observations in regard to the changes produced in the same substances, are derived from the experiments of Dr. Beaumont, performed, in the majority of cases, with the gastric juice out of the body; with the general statement that they resembled very nearly the changes which similar aliment was found to undergo when submitted to the natural actions of the stomach.

When gastric juice and *liquid albumen* were mixed together, they were so much alike in their appearance at first, that no change was perceptible; but in ten or fifteen minutes, small, white flocculi began to appear, floating about, and the mixture became of an opaque whitish appearance. This appearance continued slowly and uniformly to increase for three hours, at which time the fluid had become of a milky appearance; the small flocculi had mostly disappeared, and a little light coloured sediment subsided to the bottom. No results are given of the action of the gastric fluid upon *coagulated albumen.*

Eight ounces of calf's-foot *jelly* alone were swallowed at 1 o'clock, p.m. The stomach being examined in twenty minutes, its contents were found to consist of gastric juice combined with the jelly, nearly all of which was in a fluid state; a few particles only of entire jelly were suspended in the fluid, with a few small, yellowish coagula floating near the surface. At 2 o'clock no appearance of jelly could be discovered. In another experiment, four ounces of pure *gelatine*, (*ichthyocolla*,) prepared with boiling water, were swallowed at 15 minutes past eight o'clock, a.m. At the end of 15 minutes the stomach appeared to be nearly as full as after an ordinary meal; it contained a clear fluid of the consistence of the white of an egg, composed apparently of the gelatine dissolved or diffused in the gastric juice. The two could not, however, be distinguished from each other. After the lapse of 45 minutes the stomach was found to be nearly empty, all that could be obtained from it being two drachms of a fluid, which appeared to be a mixture of gelatinous chyme, gastric juice, and mucous flocculi, more opaque and ropy than the gastric juice alone, and more acid than were the fluids of the stomach immediately before the gelatine was swallowed.

Thirty grains of *new cheese*, masticated, were put in three drachms of gastric juice, and kept in the axilla for eight hours and thirty minutes, when the vessel was found to contain a rich milky fluid, on which floated five grains of a matter consisting principally of oil combined with a soft caseous substance. The fluid had a strong acid, or peculiar acrid taste, and emitted a strong caseous smell, even stronger than the cheese itself, before the experiment.

*Bone*, after being dissolved in the gastric juice, formed a greyish-white opaque fluid, nearly of the colour and consistence of clear, thin gruel, with considerable fine brown sediment after standing at rest a while. It had a peculiar insipid, sweetish taste and smell, without the least fætor or rancidity.

The solvent powers of the gastric fluid being established, an important inquiry next presents itself; upon what, namely, do those powers depend! In other words, does the gastric juice act upon the food by virtue of certain specific properties which distinguish it from all other chemical agents, or are its solvent powers to be attributed solely to the acids and salts which it contains? The first of these propositions is assumed by Dr. B.

> "The action of the stomach and its fluids on aliment is believed," he remarks, "to be *sui generis*, invariably the same in health on all kinds.
>
> Chyme is a compound of gastric juice and aliment. It may be regarded as a *gastrite* of whatever it is combined with, varied according to the kind of aliment used.
>
> Like all other chemical agents, the gastric juice decomposes or dissolves, and combines with a fixed and definite quantity of matter when its action ceases."

Without stopping to comment upon the absurd and inadmissible term *gastrite*, applied to the presumed chemical compound resulting from the union of definite proportions of gastric juice and the different alimentary substances, albumen, gelatine, fecula and the like, we shall merely remark, that the specific and invariable character and action of the fluid secreted by the stomach are mere assumptions, which are disproved by the very analysis of the fluid, which shews it to be a *mixture* of mucus, water, and various salts and acids, the nature and chemical action of which are well understood. Not a single experiment is adduced by the author which would lead us even to suspect that the gastric juice possesses any solvent or chemical property other than those which result from the substances which are known to enter into its composition, or that these do not vary, in their relative proportions at least, at different times.

If it can be shewn that other of the animal fluids, or even water, with the addition of one or other of the active ingredients contained in the gastric juice, will cause a solution of alimentary substances, similar to that produced by the latter, the idea of any specific action being exerted by it is completely overthrown. As early as 1783, it was stated by Carminati, that he digested veal with a little salt, in pure water at 100° Fah. and that the veal became partially dissolved. He employed the decanted liquor in similar experiments, until at length he procured, as he asserts, a fluid possessed of solvent properties, similar to those of the gastric juice; and in 1788, Struve and Maquart made an artificial solvent of a weak solution of ammonia, which had the same properties, according to their statement, as the gastric juice. But passing over these experiments, which may be considered inconclusive, we find that Tiedemann and Gmelin in 1825, found that water slightly impregnated with acetic or hydrochloric acid, as well as a weak solution of either the acetate or hydrochlorate of ammonia severally dissolved, more or less of nearly all the animal substances employed as food. Several experiments were likewise performed by Dr. Beaumont, which prove the solvent action upon food of diluted acetic and hydrochloric acids. In one of these experiments, equal portions of beef-steak masticated, were immersed in gastric juice, and in an equal quantity of a mixture of muriatic and acetic acids, reduced by the addition of water to the flavour of the gastric fluid as nearly as practicable. Both were kept by means of a sand bath at the temperature at 100° Fah.; at the end of nine hours the meat in the gastric juice was all dissolved—that in the acid mixture when filtered, left a residuum weighing nine grains, of a gelatinous consistence. The solution in the gastric juice was opaque, and of a lightish grey colour, and deposited on standing a brown sediment. That in the acid mixture was also opaque, but of a reddish brown colour, and deposited no sediment.

A similar experiment was repeated with pure dry gelatine. At the end of nine hours the gelatine in the gastric juice was entirely dissolved; that in the acid mixture when filtered, left a residuum of three grains of a gelatinous consistence. The solution in the gastric juice was opaque, and of a whitish colour, with a little fine brown sediment; that in the dilute acids was also opaque, but of a reddish brown colour, and of a thin, mucilaginous consistence, without any sediment. When an infusion of nut-galls was added to the first, it produced a rich cream-like fluid, and slowly precipitated a fine compact sediment; when added to the second, the whole formed immediately into a coarse brown coagulum. After standing a while, a large, loose, brownish sediment was precipitated, leaving a light coloured fluid, which became subsequently as white as milk, while the sediment became compact, and remained so.

The same experiment with gelatine being repeated, at the end of five hours and a half, the portion in the gastric juice was all dissolved to a mere mite, that in the acid mixture nearly so, six grains only of a gelatinous consistence, remaining. The fluid in the first was of a blueish white colour; in the second, yellowish, or about the colour of dry gelatine. After remaining two hours and three quarters longer, the gelatine in the dilute acid was entirely dissolved, and the fluids of both were nearly similar. The addition of an infusion of nut-galls formed in each, loose light-coloured coagula. In the solution formed by the gastric juice, a compact sediment was thrown down, leaving an opaque milky fluid. In the solution formed by the acids, the coagula were not precipitated until after the lapse of forty-eight hours, forming then a compact mass with distinct particles of undissolved gelatine mixed with a dirty white-coloured, curd-like substance.

Another experiment was performed with a mixture of hydrochloric and acetic acids, diluted with water to the flavour of gastric juice. In this was immersed a portion of broiled steak, cut fine, and the same amount of steak was immersed in an equal portion of gastric juice. In six hours and three quarters, the meat in the latter was nearly all dissolved; in eight hours longer, that in the acid mixture was dissolved with the exception of a very small jelly-like mass. The two liquids now resembled each other very nearly. That from the gastric juice being opaque and of a lightish-grey colour, with a dark brown sediment on standing; that from the acid mixture was also opaque, of a reddish brown colour, but without sediment. The addition of an infusion of galls caused in the first a fine reddish brown precipitate, leaving an opaque liquor of a similar colour; in the second, a more copious precipitate, leaving a clearer and thinner, almost transparent liquor, of a yellowish colour.

It is well known that Montegre, in experiments performed with the saliva acidulated with vinegar, succeeded in dissolving various articles of food into a chymous pulp. Of the correctness of these experiments we have not the least doubt, having seen them repeated in this city with very similar results to those stated by Montegre, and having before us the additional testimony of a very late French experimenter,* who has shewn that the saliva, as well as the mucus of the intestines, obtained by opening the abdomen of an animal before eating, when slightly acidulated and kept at the temperature of the human body, will convert the food immersed in it for twenty-four or thirty-six hours into a greyish, perfectly homogeneous paste. That the intestinal mucus will produce changes in food very analogous to those resulting from the action of the gastric juice, is attested also by Tiedemann and Gmelin, as well as by Leuret and Lassaigne. The following experiment was performed by Dr. Beaumont. Two equal portions of saliva were acidulated to about the flavour of gastric juice, the one with acetic, the other with muriatic acid, and in each were immersed two pieces of parsnip and two of carrot, the one boiled and the other raw, each weighing ten grains. The temperature of the fluids was kept at 100° Fahrenheit. After 18 hours, the parsnip in the saliva with muriatic acid had lost four grains, the carrot nothing; the parsnip in the saliva with acetic acid had lost six grains, and the carrot four; they appeared to have been rather macerated and diffused than dissolved or digested. The two fluids and their contents were now mixed together, and after 24 hours the whole remaining mass of vegetable matter weighed twelve grains. The fluid appeared now a little more chymous, and was rather turbid.

---

* Benjamin Voisin de la Digestion Considerée en Général. Paris, June, 1833.

It strikes us as not a little surprising that these experiments with artificial solvents did not suggest themselves to Dr. B. at a much earlier period than they were performed, (Feb. 1833,) and that when entered upon they were not more frequently repeated with different articles of food and with acid mixtures of various strength. Incomplete as they are, they, however, prove that as far as it regards its solvent properties, at least, the gastric fluid is not sui generis.

It will not do to say that the product of these artificial solutions is not identical with that resulting from the action of the gastric juice. This must be proved by a chemical analysis of the two. But even if they should be shown in this manner to differ materially, it is to be recollected that the gastric juice contains chemical agents, independently of its acids, all of which are doubtless necessary in causing the solution of the different kinds of food, or perhaps of its different nutritive principles.

Having thus examined the observations of our author upon the nature and action of the gastric juice, we shall proceed next to the consideration of the various phenomena connected with the process of digestion. The opportunities he possessed for the careful study of these render his remarks in relation to them peculiarly interesting. It will be proper, however, to notice first the views of Dr. B. in regard to the use of the saliva.

Excepting as a means of introducing food into the animal stomach, Dr. Beaumont maintains that mastication and salivation are to be considered as "perfectly non-essential to chymification." Neither, he conceives, would be necessary, could the food in any other way be introduced into the stomach in a finely divided state. The chyme produced by the action of the gastric fluid, out of the body, on food unmixed with saliva, exhibited, he remarks, the same sensible appearances, and was affected by reagents (?) in the same way, as that which was formed by food which had been previously masticated, mixed with the saliva and swallowed. Subsequently, Dr. B. admits that *mastication* "is absolutely necessary to healthy digestion," that it is to be considered "as one of the most important preliminary steps in the process." Although these different statements amount to a direct contradiction in language, yet we presume that all that is meant is that perfect comminution of the food, in whatever way it may be effected, is essential to its digestion; though we cannot conceive how the process of mastication can be studied in its effects separately from those of insalivation, excepting with the facilities possessed by Dr. B. and of these, so far as we are able to judge, from the detail of its experiments, he does not appear to have availed himself. A series of comparative observations, shewing the difference in the digestibility of substances swallowed after mastication in the usual manner, and those introduced into the stomach through the opening in a state of minute division only, would have settled the question; especially if the composition of the chyme formed in both instances had been carefully examined. Dr. Beaumont, it is true, asserts, as we have already remarked, that chyme from food mixed with the saliva and swallowed, and that produced by the action of the gastric juice without any mixture of saliva, did not differ in appearance, and was affected similarly by reagents—the results of these experiments are not given in detail, and of course we cannot judge of their accuracy. In one experiment it was found that the saliva, when added to aliment out of the body, had the effect of facilitating the putrefaction of the latter. This agrees with the observations of the recent German and French physiologists, and with those of Montegre. If we even admit that the only effect of this secretion is to induce in the food an incipient state of putrefaction, this of itself, according to our author's own shewing, would prove that, so far as it regards animal food, it has a very considerable agency in facilitating digestion, for "the digestibility of most meats," he remarks, "is improved by incipient putrefaction, sufficient to render the muscular fibre slightly tender."

The important part performed by the saliva in digestion, is proved, we conceive, by the fact of the large glandular apparatus for its secretion, with which nearly all animals are furnished; by the great quantity which is poured into the mouth during the process of mastication—far more than would be necessary, if it had no other office, as supposed by Dr. B., than to facilitate deglutition by lubricating the alimentary bolus; and by the additional fact, that in the duodenum the chyme is invariably mixed with another portion of fluid, identical almost in its composition with the saliva. No one who has examined a portion of food after it has been well masticated, and intimately combined with the fluid furnished by the glands of the mouth, but must be convinced that a very considerable change has been produced in it. I have ascertained *positively*, remarks Dr. Jackson,* that the saliva does exert a very energetic operation on the food; separating, by its solvent properties, some of its constituent principles, and performing a species of digestion. Voisin also† declares, that when the food is retained for a long time in the mouth, and intimately mixed with the saliva, it undergoes an actual change, by which its original character is no longer distinguishable. "I have seen it," he tells us, "converted into a greyish homogeneous pulp, very much like chyme." This change in the appearance of the aliment does not merely consist, he adds, in its conversion into a soft mass, by which it is rendered more easily swallowed—it is something more; the aliment experiences a commencing decomposition. In one experiment related by this author, when food, well triturated and imbued with saliva, was introduced into the small intestine of an animal, in two or three hours its chymification was as complete as if the process had been effected in the stomach. But Dr. Beaumont is not content with setting down the saliva as unnecessary to digestion, he has undertaken to prove further, that it actually impedes the solvent action of the gastric juice. "It would seem," he remarks, "from two or three of the experiments on artificial digestion, which were instituted for the purpose of comparison, that the mixture of saliva with the gastric juice rather retarded its solvent action;" and when mixed in large amount with the gastric fluid, it renders it fœtid in a few days. Were we to admit the opinion of Dr. B. to be correct, namely, that the mixture of saliva with the solvent fluid of the stomach vitiates the latter, this would be equivalent to asserting that digestion by the natural actions of the stomach is less perfect than that performed by filtered gastric juice on finely comminuted aliment out of the body. For we are to recollect that when solid food is eaten, it does not enter the stomach until it is mixed by the process of mastication, with a large quantity of saliva, and that under ordinary circumstances a portion of the latter is always swallowed, and of course mixes with the other fluids of the digestive organs. But we are persuaded, that whoever will read with attention the experiments of Dr. B., and compare them with each other, must be convinced from them alone, that so far from the saliva being "perfectly non-essential', to digestion, it performs a very important part in facilitating the process.

We shall proceed now to give a sketch of the very interesting observations of our author in regard to various particulars connected with the physiology of the stomach, from the correctness of which, we are happy to say, we shall have but few occasions to dissent.

Dr. Beaumont has proved with great clearness, that the gastric juice does not accumulate in the stomach in the intervals of digestion, as many physiologists, and Spallanzani among the number, have supposed; but is secreted only when food is admitted into the gastric cavity, or some other stimulas is applied directly to its lining membrane. This fact was pointed out long since by Chaussier, and more recently by the experiments of Tiedemann and Gmelin, and those of Leuret and Lassaigne.

---

* Principles of Medicine, p. 354.

† Opera Citat. pp. 205-302.

When it does not contain food, Dr. B. has usually observed the stomach to be empty and contracted, the rugæ formed by its inner coats being irregularly folded upon each other, and almost in a quiescent state. The whole of the mucous membrane of the stomach when perfectly free from disease, is of a light or pale pink colour, of a soft velvet-like appearance, and covered constantly with a very thin transparent viscid mucus.

"Immediately beneath the *mucous coat* (?) and apparently incorporated with the villous membrane, appear small, spheroidal, or oval-shaped, glandular bodies, from which the mucous fluid appears to be secreted."

If the mucus covering the inner coat of the stomach be wiped off with a sponge during the period of chymification, the mucous membrane appears roughish, and at first of a deep pink colour, hut in a few seconds the follicles and fine papillæ begin to pour out their respective fluids, which being diffused over the parts from which the mucus had been removed, restore to them their peculiar soft, velvet-like appearance and pale pink colour, and the gastric juice begins to trickle down the sides of the stomach. When the mucus is wiped off during the period the stomach is empty, a similar roughness and deepened colour are produced, though in a less degree. The follicles appear to swell more gradually, and the fluids are not secreted in sufficient quantity to trickle down, as during the period of chymification.*

When the tongue is applied to the mucous coat of the stomach in the empty, unirritated state of the organ, no acid taste is perceptible, but whenever food or any other irritant is applied to the membrane so as to excite the gastric papillæ, an acid taste is immediately perceptible.

The ordinary temperature of the interior of the stomach during health, Dr. B. has ascertained to be about 100° Fahr. as well in the intervals as during the process of digestion. There would appear, however, to be some difference in the temperature of different regions of the organ, it being somewhat higher at the pyloric than at the cardiac extremity. Variations in the state of the atmosphere were found in some of Dr. B.'s experiments, to affect the temperature of the stomach; a dry state of the atmosphere increasing, and a humid one diminishing it. Active exercise also was found to elevate invariably the temperature of the stomach, under all circumstances, about one and a half degrees.

When a portion of food is received into the stomach, the action of the vessels of its mucous coat becomes increased, the latter acquires a brighter red colour, the vermicular motions of the organ are excited, and the secretion of the gastric juice commences.

The latter appears to issue "from innumerable vessels, distinct and separate from the mucous follicles. These vessels, when examined with a microscope, appear in the shape of small lucid points, or very fine papillæ, situated in the interstices of the follicles." The gastric fluid, according to the observations of the author, is secreted in quantities exactly proportioned to the amount, and greater or less degree of solubility of the food admitted into the stomach, excepting when more is eaten than is necessary for the wants of the system. The fluid is either absorbed by the portion of aliment in contact with the coats of the organ, or collects in small drops, and trickles down the sides of the stomach, to the more depending parts, and there mingles with the food or whatever else the stomach contains.

---

* Dr. Beaumont speaks of wiping off the mucous coat or *membrane* of the stomach, (page 107,) and of the mucous *coat* being restored, (ibid) these are certainly only loose modes of expression; he cannot possibly have confounded the mucous tissue of the stomach with the mucus by which it is covered; and yet we might infer this from his language, especially when he speaks constantly of a villous coat independently of the mucous coat. We have marked in numerous parts of the work expressions in the highest degree inaccurate: thus, he speaks of "*nervous* or vascular papillæ" secreting the gastric juice, (pp 103–4,) of glands constituting a part of "the erectile tissue of the stomach, (p. 58) and of the "excretory ducts of the gastric vessels." (p. 104.)

"In febrile diathesis, or predisposition from whatever cause—obstructed perspiration, undue excitement by stimulating liquors, overloading the stomach with food—fear, anger, or whatever depresses or disturbs the nervous system, the villous coat becomes sometimes red and dry, at other times pale and moist, and loses its smooth and healthy appearance—the secretions become vitiated, greatly diminished, or entirely suppressed—the mucous coat (?) scarcely perceptible, the follicles flat and flaccid, with secretions insufficient to protect the vascular and nervous papillæ from irritation.

There are sometimes found on the internal coat of the stomach, eruptions or deep red pimples, not numerous, but distributed here and there upon the villous membrane, rising above the surface of the mucous coat. (?) These are at first sharp-pointed and red, but frequently become filled with white purulent matter. At other times, irregular, circumscribed, red patches, varying in size or extent, from half an inch to an inch and a half in circumference, are found on the internal coat. These appear to be the effect of congestion in the minute blood-vessels of the stomach. There are also seen at times, small aphthous crusts in connexion with these red patches. Abrasions of the lining membrane, like the rolling up of the mucous coat (?) into small shreds or strings, leaving the papillæ bare, for an indefinite space, is not an uncommon appearance.

These diseased appearances, when very slight, do not always affect essentially the gastric apparatus; (?) when considerable, and particularly when there are corresponding symptoms of disease, as dryness of the mouth, thirst, accelerated pulse, &c. no gastric juice can be extracted, not even on the application of alimentary stimulus. Drinks received are immediately absorbed, or otherwise disposed of; none remaining in the stomach ten minutes after being swallowed. Food taken in this condition of the stomach, remains undigested for 24 or 48 hours, or more, increasing the derangement of the whole alimentary canal, and aggravating the general symptom of disease."

Dr. B. has observed that when a portion of food is received into the stomach, the rugæ of the latter gently close upon it, and, if sufficiently fluid, gradually diffuse it through the cavity of the organ, entirely excluding more during this action. The contraction ceasing, another quantity of food will be received in the same manner. It was found that when the valvular portion of the stomach in the subject of his experiments was depressed, and solid food introduced, either in entire pieces or finely divided, the same gentle contraction or grasping motion took place, and continued for fifty or eighty seconds, and would not allow of the introduction of another quantity until that period had elapsed, when the valve could be again depressed and more food put in. When the subject was so placed that the cardia could be seen, and then allowed to swallow a mouthful of food, the same contraction of the stomach and grasping of the bolus was invariably observed to commence at the œsophageal ring. Hence, when food is swallowed too rapidly, irregular contractions of the muscular fibres of the œsophagus and stomach are produced, the vermicular motions of the rugæ are disturbed, and the regular process of indigestion interrupted.

Contrary to the opinions of many physiologists, Dr. B. has ascertained that the solution of the food commences immediately after it is received into the stomach. Water, alcohol, and other fluids not containing alimentary matter in solution, pass from the stomach very soon after they are received, either by absorption or through the pylorus. Liquid albumen and albuminous fluids are first coagulated, and then dissolved by the gastric juice. Food taken in a liquid form combined with a large quantity of water, as soup, &c. is deprived by absorption of its aqueous portion before its digestion is commenced.

According to Dr. Wilson Philip, and the fact is confirmed by the experiments of Brodie, Broughton, Breschet, Edwards, and others, the digestion of the food commences first in the portion immediately in contact with the surface of the stomach, and as the thin layer of chyme there formed is removed by the muscular action of the organ, a second layer is chymified—digestion always commencing on the surface of the food. In reference to this opinion, Dr. Beaumont remarks:—

“ That chymification commences on the surface of the food I have no doubt; but I apprehend this to be the case as it respects each individual portion, and not the whole mass.

When a due and moderate supply of food has been received, it is probable that the whole quantity of gastric juice for its complete solution, is secreted, and mixed with it in a short time. If a tenacious mass of food be used, the external portion of the whole quantity is first acted on, digested, and succeeding portions presented, &c. From numerous examinations of the stomach, I feel warranted in saying, at least in the human subject, that there is a perfect admixture of gastric juice and food—that the particles of food are constantly changing their relations with each other.”

We would inquire, however, of Dr. Beaumont, whether he has ascertained positively that contact of the food with the coats of the stomach is not essential to its perfect digestion? The whole mass of food contained in the stomach may be pervaded by the gastric juice and solution go on equally in every part of it, but the question is, does a single particle become converted into perfect chyme that has not come in contact with the parietes of the digestive organ, so as to enable the absorbents of the latter to act upon it? From a careful consideration of all the phenomena of digestion, we feel no hesitation in asserting as our opinion, that chymification, strictly speaking, invariably takes place in that portion of the aliment which is applied to the inner surface of the stomach, and that it can take place no where else. It will not do for Dr. B. to reply that he has produced chyme by the action of the gastric juice on aliment out of the stomach, he must first show by a chemical analysis that the fully formed chyme as it passes into the duodenum, and the food after its solution, merely, by the gastric juice, are identically the same—and this he has not even attempted to do. That the absorbents of the stomach do act upon the aliment is proved by the fact, that a chylous fluid is formed by these vessels as well as by those of the intestines. This is shewn by the experiments of Leuret and Lassaigne, and more recently by those of Voisin.

Dr. Beaumont having observed a large portion of fluid in the stomach, even after a dry and solid meal had been eaten, presumes that a synthetic formation of water from its elements takes place in that organ. We need only remark that the supposition is in the highest degree improbable; whatever amount of fluid may be poured into the stomach during digestion, we have no right to refer it to any other source than the exhalants of the mucous membrane.

The stomach is not quiescent during the process of chymification. By the alternate contraction and relaxation of its transverse muscular fibres a peristaltic motion is produced, which commences soon after the food is received, and causes the latter to revolve around the interior of the gastric cavity, from point to point and from one extremity to another.

“ The ordinary course and direction of the revolutions of the food,” according to our author's observations, "are first, after passing the œsophageal ring, from right to left, along the small arch; thence, through the large curvature, from left to right. The bolus as it enters the cardia turns to the left, descends into the splenic extremity, and follows the great curvature towards the pyloric end. It then returns, in the course of the smaller curvature, to perform similar revolutions."

These revolutions are completed in from one to three minutes. They are, however, slower at first than after chymification has considerably advanced.

The motions of the stomach not only produce the revolutions of the food just referred to, but, by a kind of agitation or *churning* of the contents of the organ, cause the particles of the aliment to be separated from each other and intimately mixed with the gastric fluids.

"There is nothing," remarks Dr. B. "of the distinct lines of separation between the old and new food, and a peculiar central or peripheral situation of crude as distinguished from chymified aliment, said to have been observed by Philip, Magendie, and others in their experiments on dogs and rabbits, to be seen in the human stomach: at least in that of the subject of these experiments. The whole contents of the stomach, until chymification be nearly complete, exhibit a heterogeneous mass of solids and fluids; hard and soft, coarse and fine, crude and chymified; all intimately mixed, and circulating promiscuously through the gastric cavity, like the mixed contents of a closed vessel, gently agitated or turned in the hand."

We suspect, however, that this commixture of the different contents of the stomach, noticed in the experiments of our author, must, in some measure, have been owing to the manner in which he extracted them for examination; namely, "by depressing the valve within the aperture, shaking a little, and pressing upwards." The firm compression which the stomach exerts upon its contents, would, of itself, be sufficient to force the more fluid portions to the surface, and unless some such separation does take place we cannot conceive how the digested food is carried off, by the muscular actions of the stomach, through the pylorus, while that which has not undergone the process of chymification is retained. On two occasions Dr. B. would seem to admit, that the digested and undigested portions of the aliment occupy different portions of the gastric cavity. Thus, at page 142:—

"It is possible," he remarks, "that the portion (of aliment) presented at the perforation, may be in a more advanced stage of digestion than the rest of the mass, and consequently lighter, and float on the surface of the more solid portions of the food. In ordinary cases such would be found to be the case."

And again, at page 144:—

"It may be inferred from this experiment, (the 26th) that the more perfectly chymified portions of food rise to the superior part of the stomach, as suggested in a preceding observation, and are consequently exposed at the perforation, from whence parcels are taken for experiment and examination."

According to Dr. Wilson Philip's observations, when food has been taken at different times, the new is never mixed with the old. Dr. Beaumont, however, conceives that this statement is not correct, but that in a very short time the food already in the stomach and that subsequently eaten become combined.

"One thing," he remarks, "is certain, and it is capable of demonstration in the stomach of the subject of these experiments, that old and new food, if they are in the same state of comminution, are readily and speedily mixed in the stomach."

The ordinary time required for the complete digestion of the food received into the stomach, during a healthy state of the organ, Dr. B. has ascertained to be about three hours and a half. The facility of digestion is modified, however, by many circumstances, as idiosyncrasies, habit, the nature of the food and the manner in which it is prepared. Minuteness of division of the aliment and tenderness of its fibre, would appear to be the two great essentials for its speedy and easy digestion.

"Albumen, if taken into the stomach, either very slightly or not at all coagulated, is perhaps as rapidly chymified as any article of diet we possess. If perfectly formed into hard coagula by heat or otherwise, and swallowed in large solid pieces, it experiences a very protracted digestion. Fibrine and gelatine are affected in the same way. If tender and finely divided, they are disposed of readily; if in large and solid masses, digestion is proportionably retarded."

Animal fat is very quickly and invariably rendered fluid by the heat of the stomach, and, together with every species of oily food, resists for a long time the action of the digestive organ and its fluids. Dr. B has observed that when the use of fat or oily food has been persevered in for a long time, there very generally takes place an admixture of bile with the gastric fluids, and from numerous experiments he has been led to believe that this admixture of bile has the effect of facilitating the solution of such kinds of aliment.

"Bulk is, perhaps, nearly as necessary to the articles of diet as the nutrient principle. They should be so managed that one should be in proportion to the other. Too highly nutritive diet is probably as fatal to the prolongation of life and health, as that which contains an insufficient quantity of nutriment."

Solid aliment Dr. B. has observed to be sooner disposed of by the stomach than fluid; he conceives, also, that its nutritive principles are sooner carried into the circulation. The correctness of the latter proposition is however very doubtful; the very fact admitted by the author, that exhaustion from abstinence, namely, is more quickly removed by liquid than by solid food, would certainly seem to disprove it.

An incipient state of putrefaction, sufficient to render the muscular fibre slightly tender, was found to increase the digestibility of most kinds of flesh.

Vegetable aliment, generally speaking, he discovered to be slower and more difficult of digestion than animal. Its solution in the stomach is greatly influenced, however, by division and tenderness of fibre. Crude vegetables often pass through the pylorus in an undigested state, while other food is retained and fully digested.

The thorough mastication of the food is essential to healthy digestion.

"If aliment," remarks the author, "in large masses be introduced into the stomach, though the gastric juice may act upon its surface, chymification will proceed so slowly, that other changes will be likely to commence in its substance before it will become completely dissolved. Besides, the stomach will not retain undigested masses for a long time without suffering great disturbance."

Consequently, eating too fast impedes digestion, by introducing food into the stomach in a state unprepared for the actions of that organ and of its fluids. If food, also, be swallowed too rapidly more will in general be taken into the stomach, before the sense of hunger is allayed, than can be digested with ease.

Overloading the stomach with aliment was invariably found to interfere with the regular process of chymification; a portion remaining for a long time undigested. This very soon becomes rancid or runs into acetous fermentation, and if not rejected by vomiting, causes pain and irritation of the stomach and other distressing symptoms; or it is permitted to pass into the intestines, where its presence almost invariably gives rise to colic, flatulence, or even more dangerous affections.

The reason why too large an amount of food is injurious, is supposed by our author to be, because "the quantity of gastric juice, either contained in its proper vessels, or in a state of preparation in the circulating fluids, is believed to be in *exact proportion* to the proper quantity of aliment required for the due supply of the system." Hence, if more food than is necessary be taken, a part of it must consequently remain undigested. We have no evidence, however, that the solvent fluid secreted by the stomach is furnished only in a certain amount; it appears to us more probable, that when too large a quantity of food is eaten, it causes an undue distention of the stomach, and in this manner prevents its regular and healthy actions from going on; while, at the same time, most generally the food is swallowed faster than the gastric juice is secreted, and in a state unfitted to be acted upon by it.

Condiments, according to our author, though they may at first excite the action of a debilitated stomach, yet when used habitually, never fail to produce indirect debility of that organ, and in this manner impede digestion.

> "Salt and vinegar are exceptions, and are not obnoxious to this charge when used in moderation. They both assist digestion—vinegar, by rendering muscular fibre more tender—and both, by producing *a fluid having some analogy to the gastric juice.*"

Alcoholic, and Dr. B. thinks probably all artificial drinks, impede more or less the digestive process; some more so than others: "but none can claim exemption from the general charge. Even coffee and tea, the common beverages of all classes of people, have a tendency to debilitate the digestive organs." In the correctness of these opinions we most heartily and fully concur.

Our author has found, from numerous trials, that moderate exercise, so far from interrupting digestion, conduces greatly to its healthy and rapid performance. Severe and fatiguing exercise, however, always retards digestion.

It is stated by most physiologists, that during digestion the stomach becomes a centre of fluxion: but against the use of such an expression Dr. Beaumont strongly objects; it being one, as he declares, to which no definite meaning can be attached. We confess that we were somewhat surprised at this assertion: we have repeatedly employed the same expression ourselves, and really did believe that we were conveying to all our readers who were any way conversant with medical language a definite idea; namely, that more blood is determined to the stomach during the period of digestion than when the functions of that organ are not in exercise.* That the stomach really does become a centre of fluxion when digestion is going on, is proved by the observations which Dr. B. has himself recorded. He tells us that, during digestion, the action of the vessels of the mucous membrane is increased, that the colour of the latter is of a brighter red, and that a very copious secretion takes place from its follicles and papillæ—that all this is occasioned by an irritation of the membrane resulting from the presence of the food; and further, that gentle exercise increases the circulation in the vessels of the stomach and the temperature of the latter, and in this manner facilitates digestion.

> "As the food becomes more and more changed from its crude to its chymified state, the acidity of the gastric fluids is considerably increased: more so in ve-

---

* We entirely agree with the transatlantic reviewer in the above remarks. We wonder, indeed, how any accurate observer could doubt the fact that, during digestion, the vital powers, as well as the vital fluids, are concentrated on the digestive apparatus. Let any one carefully attend to his own feelings, and to the phenomena presented in his own person, and he will soon be convinced of the truth of these observations.—*Editors of the Medico-Chirurgical Review.*

getable than *in* animal diet; and the general contractile force of the muscles of the stomach is augmented in every direction; giving the contained fluids an impulse towards the pylorus.

"It is probable that from the very commencement of chymification—from the time that food is received into the stomach, until that organ becomes empty, portions of chyme are constantly passing into the duodenum, through the pyloric orifice, as the mass is presented at each successive revolution. I infer this from the fact, that the volume is constantly decreasing. This decrease of volume, however, is slow at first; but is rapidly accelerated towards the conclusion of digestion, when the whole mass becomes more or less chymified. This accelerated expulsion appears to be affected by a peculiar action of the transverse muscles, or rather of the *transverse band*, as described by Spallanzani, Haller, Cooper, Sir E. Home, and others, in their experiments on animals. This band is situated near the commencement of the more conical shaped part of the pyloric extremity, three or four inches from the smaller end. In attempting to pass a long glass thermometer tube through the aperture, into the pyloric portion of the stomach, during the latter stages of digestion, a forcible contraction is first perceived at this point, and the bulb is stopped. In a short time there is a gentle relaxation, when the bulb passes without difficulty, and appears to be drawn forcibly, for three or four inches, towards the pyloric end. It is then released, and forced back, or suffered to rise again; at the same time giving to the tube a circular, or rather spiral motion, and frequently revolving it completely over. These motions are distinctly indicated, and strongly felt, in holding the end of the tube between the thumb and finger; and it requires a pretty forcible grasp to prevent it from slipping from the hand, and being drawn suddenly down to the pyloric extremity. When the tube is left to its own direction, at these periods of contraction, it is drawn in nearly its whole length, to the depth of ten inches; and when drawn back, requires considerable force, and gives to the fingers the sensation of a strong *suction* power, like drawing the piston from an exhausted tube. This ceases as soon as the relaxation occurs, and the tube rises again of its own accord three or four inches, when the bulb seems to be obstructed from rising further; but if pulled up an inch or two through the stricture, it moves freely in all directions in the cardiac portions, and mostly inclines to the splenic extremity, though not disposed to make its exit at the aperture. Above the contracting band, and towards the splenic portion of the stomach, the suction or grasping motion is not perceptible, but when the bulb is pushed down to this point, it is distinctly felt to be grasped, and confined in its movements. These peculiar motions and contractions continue until the stomach is perfectly empty, and not a particle of food or chyme remains, when all becomes quiescent again.

If the bulb of the thermometer be suffered to be drawn down to the pyloric extremity, and detained there for a short time, or if the experiment be too frequently repeated, it causes severe distress, and a sensation like cramp or spasm, which ceases on withdrawing the tube, but leaves a sense of soreness and tenderness at the pit of the stomach.

These peculiar contractions and relaxations succeed each other at irregular intervals, of from two to four or five minutes. Simultaneously with the contractions, there is a general shortening of the fibres of the stomach. This organ contracts upon itself in every direction, and its contents are compressed with great force. During the intervals of relaxation, the rugæ perform their vermicular motions, and the undulatory motions of the fluids continue."

From the foregoing facts, Dr. B. draws the following conclusions: namely, that—

"The longitudinal muscles of the whole stomach, with the assistance of the transverse ones of the splenic and central portions, carry the contents into the pyloric extremity. The circular or transverse muscles contract progressively from left to right. When the impulse arrives at the *transverse band*, this is excited to a more forcible contraction, and closing upon the alimentary matter and fluids contained in the pyloric end, prevents their regurgitation. The muscles of the pyloric end now contracting upon the contents deposited there, separate and expel some portion of the chyme. After the contractile impulse is carried to the pyloric extremity, the circular band and all the transverse muscles become relaxed, and a contraction commences in a reversed direction from right to left, and carries the remaining contents again to the splenic extremity, to undergo similar revolutions."

"After the expulsion of the last particles of chyme, the stomach becomes quiescent, and no more (gastric) juice is secreted, until a fresh supply of food is presented for its action, or some other mechanical irritation is applied to the internal coat (of the organ.)"

We have inserted the preceding quotations, notwithstanding their length, in consequence of the highly interesting view which they present of the muscular actions of the stomach during digestion. The opportunity which the author enjoyed for studying them with care, precludes any doubt as to the correctness of his observations.

We come next to the consideration of a very important question; what, namely, are the changes produced in the food by the process of chymification? That solid food is dissolved in the stomach, we have now most abundant proof, and that most kinds of aliment undergo other and still more important changes, we have very strong reasons for presuming. But whether these changes consist merely in the breaking up of the union which existed between the proximate principles of the food, in the separation of such as are adapted for the formation of chyle from the recrementitious particles, or in an actual alteration in its chemical composition, are questions which still remain undecided. Not the least information in relation to them can be gleaned from the experiments and observations under review.

Chyme, or the product of stomachic digestion, is generally described to be a homogeneous, grayish paste, of a slightly acid taste; its acidity was found by Tiedemann and Gmelin to be greatest when the food is the most difficult of digestion. According to the observations of Dr. B. in its homogeneous appearance the chyme is invariable, but not in its colour, this being affected in a slight degree by the kind of food from which it is produced.

"It is always," he remarks, "of a lightish or grayish colour, varying in its shades and appearance from that of cream to a grayish or dark-coloured gruel. It is also more consistent at one time than at another; modified in this respect by the kind of diet used. This circumstance, however, does not affect its homogeneous character. A rich and consistent quantity is all alike, and of the same quality. A poorer and thinner portion is equally uniform in its appearance. Chyme from butter, fat meats, oil, &c. resembles rich cream. That from farinaceous and vegetable diet has more the appearance of gruel.—It is invariably distinctly acid, and possesses properties different from the elements of which it is composed."

A series of microscopic examinations of the chyme are furnished by the author; they lead, however, to no satisfactory conclusions in regard to its real character and composition.

It will, no doubt, be anxiously inquired, whether, by the experiments and observations of Dr. Beaumont, all the agents concerned in the process of digestion have been determined? To this inquiry, the reply must be in the negative. Excepting so far as relates to the solvent powers merely of the gastric juice, they leave every thing in relation to the efficient cause of digestion in the same doubt and obscurity in which it was previously involved. Dr. B. it is true, infers from the result of his experiments, that the gastric fluid is the sole agent, by which the food is converted into chyme; but until he shall be able to prove that fully-formed chyme, in the state in which it passes into the duodenum, and the fluid mass which results from the action of the gastric juice alone upon the food, are in all respects identically the same, and that the absorbents of the stomach do not act upon the dissolved aliment presented to their orifices, we must be permitted to consider his opinion in regard to the uses of the gastric juice as a mere hypothesis, the facts in support of which are still to be made out. Even the proposition with which the work before us closes, namely, "that *no other* fluid produces the same effect on food that gastric juice does, and that it is the *only solvent* of *aliment*," he is very far from having established. Tiedemann and Gmelin, as well as Leuret and Lassaigne, maintain, as the result of their experiments, that the mucus of the intestines possesses equally with the gastric juice the power of dissolving the food and converting it into a substance similar to chyme, and the fact is supported by the later observations of Voisin. The latter gentleman relates a number of experiments which prove that the gastric juice is not essential to the perfect digestion of alimentary substances. Of these experiments we present the following summary:—1st. Food triturated and mixed with saliva, when introduced into the small intestines of an animal, was in two or three hours as completely chymified as though the process had been performed in the stomach. 2d. Food of a moderate consistence, without any preparation, introduced into the upper portion of the small intestine of an animal, the communication between the intestine and stomach being cut off by the passage of a ligature, became perfectly chymified. Chyle as well as fæces were also formed. A dog was nourished in this manner for a month, and then killed. 3d. Food introduced into the cœcum, the ileo-cœcal valve being closed by a ligature, was, at the end of four hours, found to be sensibly changed, and presented some of the characters of chyme.

The fact is, the absorbents of the stomach and alimentary canal generally, perform a much more important part in the process of digestion than is commonly supposed. Doubtless the saliva, the gastric fluids and even the bile and pancreatic juice, all, under ordinary circumstances, facilitate in a very great degree the conversion of the food into chyme and the formation of chyle; but to no one nor to all of them are we inclined to ascribe any further agency in the process of digestion.

A number of experiments were performed by Dr. B. to ascertain, if practicable, the effects produced by the bile and pancreatic juice, when added to chyme. These experiments are acknowledged by the author to be very imperfect, and to lead to no positive conclusions. In the general summary, nevertheless, of the inferences which he conceives to be deducible from his experiments and observations is the following, namely, "that chyme is formed in the duodenum and small intestines, by the action of bile and pancreatic juice on the chyme." It is hardly necessary for us to enter into a refutation of this assertion. No physiologist, so far as we are aware, states that he has ever *seen* chyle in any part of the cavity of the intestines, while many, after performing numerous experiments to determine the fact, have declared that chyle never exists out of the lacteals, a conclusion which is now almost universally adopted. That the bile and pancreatic juice, particularly the former, are not by any means essential to the formation of chyle, is conclusively established by the facts adduced by the German and French experimenters so frequently alluded to in this review, and which, likewise, very clearly point out the manner in which Brodie and Mayo were led into the erroneous conclusion that when the choledochus duct is tied in animals no trace of chyle can be detected in the lacteals. The recent experiments of Voisin prove, also, that chyle is formed notwithstanding the obliteration of the common duct of the liver and gall-bladder. With these remarks we take our leave of this portion of Dr. Beaumont's work.

Before concluding, we have a remark or two to make in reference to our author's explanation of the cause of hunger. Dr. B. maintains, that the quantity of gastric juice necessary for the solution of just so much food as is required for the due support of the system is prepared during the intervals of digestion, and, just before a meal, fills and distends its proper vessels, ready to be poured into the stomach the moment food is swallowed; and that the sensation of hunger is produced by this distention or repletion of the secernent vessels of the stomach by the gastric fluid.

We might reply to this hypothesis by asking the author for the evidence by which the correctness of his premises is established. Is it established satisfactorily, that the gastric juice is secreted previously to the stimulus of food being applied to the coats of the stomach, and only in a certain definite amount? Or can it be proved that a distention of the "gastric vessels," as Dr. B. terms them, does really exist whenever the sensation of hunger is experienced, and that the intensity of the latter is in exact proportion to the degree in which these vessels are loaded with the solvent fluid? We shall certainly be excused if we refuse our assent to the author's explanation of the cause of hunger, until the above points are clearly made out. But in the absence of any fact which bears directly upon them, we conceive that from the author's own experiments the incorrectness of his views in this particular may be shown. 1st. If there is in fact an exact relation between the quantity of the gastric juice in its proper vessels, and the quantity of aliment demanded by the wants of the system, how is it possible that the subject of our author's experiments could take into his stomach a full meal, a very short time after Dr. B. had drawn off one or two ounces of the juice, and yet digestion be regularly and promptly performed without being in the least affected by the loss of so considerable a portion of the proper solvent fluid. 2dly. If hunger depend upon the distention of certain vessels of the stomach by the gastric juice, how comes it that an hour or two before the least sensation of hunger was experienced, the author was able to draw off a large amount of gastric juice from the stomach, without the appetite of the patient being prevented from occurring at his regular meal-time, while in other instances, immediately preceding a meal a very small quantity of the juice was with difficulty procured, and yet the usual amount of food being taken immediately afterwards, its digestion was effected without the slightest unusual delay or difficulty. 3dly. How does the author's theory of the cause of hunger comport with the following fact. In experiment 64, page 207, three drachms of gastric juice were extracted from the stomach, and in fifteen minutes afterwards the young man ate four ounces of pure gelatine prepared with boiling water, which was almost entirely digested at the end of an hour, when a breakfast of pork and bread was taken with the usual degree of appetite. Thus, notwithstanding the unloading of the distended vessels by the extraction of three drachms of gastric juice, and by that which was poured into the stomach to dissolve four ounces of gelatine, it appears that the ordinary natural appetite of the subject was in no degree destroyed.

In many persons appetite for food is destroyed by allowing the usual period of a meal to pass by without eating, and in most individuals it is almost instantly dissipated, and even the food already taken prevented from being digested, by sudden emotions of the mind, disgust and other sensations. These facts, it is true, may be explained in conformity with the views advanced by our author, by supposing an immediate absorption, in such instances, of the gastric juice distending the vessels, and a suspension for a time of its further secretion; but we have no evidence either that distention of the gastric vessels or absorption of the gastric juice contained in them takes place. If we were to presume that distention of the gastric vessels produces the sensation of hunger, and that when aliment is not taken into the stomach at regular periods the gastric juice is absorbed, prolonged abstinence, whatever effects it may produce upon the system, should never give rise to that craving for food, that extreme hunger, which we know is the most tormenting phenomenon by which it is attended.

There are many other points embraced in the work before us which we should like to have noticed, had our limits permitted, but we must now draw our remarks rapidly to a close.

We have presented, so far as we were able, in the space allotted to this review, a clear, and we trust satisfactory, view of the labours and opinions of the author. We have acknowledged the importance of the facts established by his experiments and observations, and given him credit for the perfect candour with which his opinions have been formed; we have taken the liberty, however, to dissent from the latter whenever we believe them to be unsupported by sufficient evidence, or in opposition to the facts already in our possession.

The experiments and observations of Dr. Beaumont cannot fail to be favourably received by the members of the profession, as affording, in very many particulars, a valuable addition to their knowledge of the physiology of certainly one of the most important organs of the animal system, and as a means of facilitating the inquiries of future experimenters into the true nature and cause of chymification.

In the event of a second edition, which will no doubt be speedily called for, a careful revision of his text will enable the author to remove those inaccuracies and obscurities of style with which the present is replete.

## MEMOIR OF THE LIFE AND MEDICAL OPINIONS OF JOHN ARMSTRONG, M.D. TO WHICH IS ADDED, AN ENQUIRY INTO THE FACTS CONNECTED WITH THOSE FORMS OF FEVER ATTRIBUTED TO MALARIA OR MARSH EFFLUVIUM. By *Francis Boott*, M.D. Secretary to the Linnæan Society, &c. &c. Second Volume, 8vo. pp. 752, 1834.

IN a former number of this Journal we gave some account of the first volume of Dr. Boott's work, more especially of that part of it which related to the life and death of our old and esteemed friend Dr. John Armstrong. We did not enter on the wide range of enquiry respecting the nature and causes of fever, commenced in the first volume and concluded in this the second; deterred, partly by the difficulty, partly by the extent of the investigation. Even now, our moral courage is not "screwed up to the sticking point; and while we admire the talent, we still more admire the patience with which Dr. Boott has pursued a subject that may be said to be at once exhausted and untouched. The labourers in this fertile field of inquiry have reaped little more than if they had been tilling the sands of Africa, or ploughing the wavy ocean. Their tracks have been obliterated, one after the other, as the footsteps of the traveller are effaced by the first gale in the desert, or the wake of the scudding bark by the rolling waves that pursue her.

In the course of enquiry into the causes of fever, by various authors, during the last fifty years, one thing is clear, that more and more stress is daily laid on terrestro-aerial causes, and less on specific contagions. While some inquirers (for instance, Dr. Maclean and others) have denied that plague itself originates from contact or contagion, the greater part of the more close observers have limited very much the range of this dreaded agent, and viewed fevers, as well as many other diseases, as generally of an epidemic nature, and only occasionally taking on the adventitious power of propagating themselves from person to person, independent of the primary or essential cause. Our present author appears to go beyond this medium line, and to incline much towards the ultra tenets of the Maclean school. We acknowledge, too, that he supports his tenets with no less ability than ingenuity. He commences his investigation with the plague of the Levant, and thinks he can shew that—"it is a malarious disease, depending on those inscrutable causes which give an epidemic prevalence and intensity to specific fever." He remarks that, if many men of great talent and observation contend that plague is propagated, like small-pox, from person to person, the same was long contended for in the case of the yellow fever of America, which is now almost universally allowed to be an endemic disease, dependent on locality and temperature. Sydenham and Armstrong are referred to, as favouring the idea that plague bears a close analogy to typhus.

> "The views of Dr. Armstrong with respect to the general character of marsh fever, if applied to plague, would remove much of the uncertainty which has prevailed as to the pathological conditions of its various forms, and would lead to the adoption of a more rational treatment; and to shew that these views were applicable to it, was the motive which induced him to make it the subject of a separate essay. He was of opinion that it was a very aggravated form of typhus, arising, like it, originally from malaria, characterised by the same general conditions, and to be treated on the same principles: that its intensity depended upon those occasional differences in the concentration of the remote cause, and upon that variable state of predisposition which is connected with seasons, habits and the changeable circumstances of life: that while, in every epidemic of plague, cases were observed not distinguishable from the typhus of this country, so here, in severe visitations of the epidemic prevalence of the last, instances were occasionally met with which approached in character to the true plague. In those countries where plague is frequently epidemic, it is not surprising, judging from the analogy of yellow fever, that it should assume a variable character. In this country, typhus has a narrower range, because there are no circumstances favouring its more aggravated forms, so that it is only at long intervals, and in individual cases, that it assumes a malignancy like that of plague. In the South of Europe, Asia and Africa, these circumstances more commonly occur, and every gradation of effect is met with. 'The plague,' says Sir A. B. Faulkner, 'above every other distemper with which I am acquainted, either by reading or experience, is one of the most irregular type, modified in its symptoms and appearances to a degree surpassing all belief, and every attempt to explain by difference of constitution, age, temperament, manner of life, and other peculiarities in its victims. The character of the concomitant fever becomes extremely irregular, assuming every shade of variety, from synocha down to the lowest degree of typhus, and in some instances having accessions of rigor not unlike an irregular species of intermittent.'" 6.

Our author conceives that "the doctrine of contagion fettered the mind of Bancroft, and prevented his taking those enlarged views with regard to typhus and plague, which he has forcibly applied to yellow fever."

"The existence of an interminating and remitting type of fever in plague, which was observed by Price and Sir James M'Gregor in Egypt, is attempted to be explained by Bancroft on the supposition of the joint action of malaria and the contagion of plague, just as Chisholm accounted for his Bulam fever by associating malaria with the contagion of typhus. This idea of two distinct causes co-operating to produce a compound disease arose among the advocates of contagion, who were otherwise unable to explain the occurrence of intermitting fever in epidemics, which ultimately assume a continued typhoid character. Pringle endeavoured on this supposition to explain the Hungarian fever of the sixteenth century, from the belief that marsh exhalations alone could give rise to the periodical types of fever, and that the malignant continued form was the exclusive progeny of human effluvia." 7.

Dr. Boott, as an attentive observer of facts, must be aware that *almost* every disease is influenced and modified by the epidemic constitution of the day, as well as by locality and climate. Why then should not plague take on a remittent, or even intermittent form occasionally, when malaria, the grand source of intermittent affections, prevails in an unusual degree? The following argument is, in our opinion, more germane to the subject.

"The affection of the glandular system, though considered as pathognomonic of plague, is not universal in that disease, nor confined exclusively to it. We have occasional evidence, not only of buboes and carbuncles, but of exanthemata in typhus and yellow fever; and, however difficult it may be to account for the comparative infrequency of the two former affections in the latter diseases, their occasional occurrence is a subject of important consideration, as adding some weight to the idea of the three diseases being mutually allied. It is only in the worst cases of typhus that these more frequent symptoms of plague make their appearance, which would lead to the inference, that the one disease is a slighter modification of the other; an impression strengthened by the character of the fever recorded by Sydenham as having preceded and followed the plague of London in 1665. It is impossible to account for the disappearance of plague in this country on the idea that it was formerly imported into it, considering how frequently those morbid states of atmosphere must have occured within the last hundred and fifty years to favour the reception and diffusion of the contagious principle, and the greater intercourse which the multiplied commercial dealings of modern times have established with the Levant; and though it may be equally difficult to explain why endemic causes, if they ever gave origin to plague in England, have not produced it since 1679, yet some portion of that difficulty is removed, on the supposition that typhus is the same disease modified by circumstances favouring the general condition of the people, and only appearing occasionally in severe epidemics with those symptoms which more particularly belong to plague." 9.

The whole of a large volume is dedicated to the illustration of this alliance between plague, yellow fever, and typhus; and, in thirteen chapters the subject is discussed with great acumen, patience, judgment, and research. This discussion is in itself an extended review and analysis of various writings, ancient and modern, which it would be utterly impossible to review or embrace in an article less extended than a whole number of this Journal. We must therefore pass over twelve out of the thirteen chapters of the work, in order to dedicate some space and attention to the concluding one—the FEVERS OF GREAT BRITAIN.

In this section the author refers chiefly to the writings of Willan and Bateman for evidence of the character of typhus in London, contrasting their observations with those of Huxham—and finally appealing to the able reports of the Irish physicians during the epidemic of 1817, to shew that the origin of that scourge was almost universally spontaneous, while its mortality was trifling compared with the epidemics of Paris, which occurred between the years 1822 and 1827, and which have been so accurately described by M. Louis, in two volumes, 8vo, 1829. Willan has furnished some data shewing the proportion, or rather disproportion, between continued and periodical fevers in London, from 1796 to 1800 inclusive. The general result is as follows:—

| | Intermittents. | Summer bilious. | Slow. | Malignant. |
|---|---|---|---|---|
| 1796 (9 months.) | 26 | 22 | 14 | 32 |
| 1797 . . . . . . . . | 13 | 20 | 21 | 51 |
| 1798 . . . . . . . . | 9 | 24 | 26 | 74 |
| 1799 . . . . . . . . | 8 | 28 | 32 | 99 |
| 1800 . . . . . . . . | 12 | 38 | 43 | 316 |

By the above table it appears that, in 1796, the intermittents were to the slow and malignant as 26 to 46;—while in the year 1800, they were as 12 to 359, or about 1 to 30! Dr. W. appears to consider the intermittents as essentially distinct from the continued malignant fevers, but, as Dr. Boott justly observes,

> "When we find that the one prevails to the exclusion of the other in different countries, each in some respects obedient to seasons, essentially perhaps autumnal diseases, as far as their maximum prevalence is concerned, heat giving an earlier developement to the one, and cold protracting the duration of the other into winter, though often as effectually checked by frost; and especially when we observe the transition of the one type into the other, we are led to believe that they are but modifications of one disease." 593.

Dr. Fothergill, indeed, in 1753, speaks of spring-fevers which, by moderate evacuations, became regular intermittents, and were cured by bark. The same he observes of summer remittents, after bleeding and emetics, becoming intermittents. "It is transitions of this nature," says Dr. B. "that justify the idea of the types of fever being modifications of one disease, varying in the same individual, and frequently assuming a difference of character in successive seasons, gradually approximating to a typhoid form, without any difference of cause beyond atmospheric influences." In 1796, between the 1st of January and the 20th of March, Willan reports the existence of much "*slow fever*," which did not arise from contagion, and did not take on any contagious character during its course. Our author takes a wide review of the fevers of this country, and then proceeds to a similar investigation of the epidemics in Ireland. We cannot follow him, but we strongly recommend the work to the candid perusal of our brethren. With the following extract we must conclude.

> "That typhus universally and exclusively depends on contagion for its origin and diffusion, the testimony of the Irish physicians, in Table No. 5, sufficiently disproves; and as Bateman and many other English authorities admit of its spontaneous origin, the question as to this point must be considered as set at rest. Whether, so arising, it is ever propagated by a contagion *sui generis*, is a

circumstance that future inquiry must determine; for though the balance of opinion is very general in its favour, the mind of the profession, so recently and so universally absorbed by the doctrine of exclusive contagion, is not unbiassed enough at present to decide upon it. That great changes have occurred in medical opinion on the subject of fever within the last 15 or 20 years, is apparent from the doctrines of the exclusive contagiousness and debility of typhus having been very generally abandoned, and from the change that has taken place with regard to the causes of yellow fever; and it cannot be doubted that the spirit of free enquiry which is abroad will lead to essential modifications in the opinion that now prevails as to the causes which contribute to the diffusion of typhus 682.

The design of Dr. Boott is clearly to lessen the extent of our belief in the doctrine of contagion, as the cause of fever, and to direct our attention more to its terrestro-aërial etiology. We are of opinion that a candid and careful perusal of these volumes will tend very much to accomplish the object he had in their construction. At all events, the author has proved himself to be a man of extended views, of unprejudiced mind, and of ample information. The profession is under much obligation to him for the pains which he has taken to compare and compile such a great mass of materials.

## THE PRINCIPLES AND PRACTICE OF OBSTETRICY. By *James Blundell*, M.D. Professor of Obstetricy at Guy's Hospital. To which are added Notes and Illustrations, by *Thomas Castle*, M.D. F.L.S. London, 1834. 8vo. pp. 838.

THE lectures of the learned Professor, as they appeared in the Lancet, in the years 1830-31, form the foundation of this large and valuable treatise, the subjects of it being merely re-arranged, subdivided, and commented on by the editor. It is well known to the whole medical profession of this country that the author of this work not only succeeded to the chair of one of the most eminent lecturers on midwifery this country has ever produced, but that he has been one of the chief supporters of the celebrity of the medical school at Guy's Hospital for the last twenty years. From this conspicuous and useful station he has just retired, and it is probable, from the state of his health and circumstances that the great mass of information contained in this volume would have been lost, or at least would have been published in a much more imperfect form had this volume never appeared. It is impossible to rise from a perusal of these lectures without being impressed with respect for Dr. Blundell. They afford ample proofs that he is a keen and cautious observer, a sincere lover of truth, remarkably free from prejudices and prepossessions of every description, and liberal and just to all. While we state this we cannot conscientiously give our approbation to every part of the work, nor do we think upon the whole that it will contribute much to the dignity or the improvement of obstetrical medicine. There is often a straining at originality where there is no new idea to express; the language is often ill-suited to the subject, being flowery and poetical when it should have been peculiarly clear and concise: in some parts there are long passages, bordering almost upon indelicacy; which is a great defect in writers and lecturers upon midwifery and the diseases of females. In proof of the latter fact see p. 70, 1, 2, and 3.

We had marked a long passage for quotation, but we really were unwilling to sully our pages with language which we are sure Dr. Blundell himself cannot approve of, when he reflects, but for a moment, on its grossness—we had almost used the term OBSCENITY.

The work of Dr. Blundell is divided into five parts. 1. The Anatomy of the Female System. 2. Physiology of the Female System. 3. Signs and Diseases of Pregnancy. 4. The Act of Delivery. 5. After-management of the Puerperal State. In the first part there is no room for originality. The account of the structure of the uterine organs is clear and correct, and it is illustrated with several wood-cuts well executed.

Menstruation, conception, sterility, and embryology, are the most important sections in the second part of the work.

Respecting the probable use of menstruation, Dr. Blundell observes:—

"Much has been written, and many points assiduously discussed, concerning the use of menstruation: but it appears most probable to me, as the discharge only flows during the child-bearing period of life, that it is associated in the way of cause and effect, with aptitude for impregnation: before puberty there is no menstruation, and after a term of some thirty years, when the powers of fecundity are lost, the menses are found to cease more or less suddenly: impregnation, however, may certainly occur, though the catamenia have never appeared." 53.

Dr. Blundell has said nothing about the influence of the ovaria on the uterine system at the period of menstruation, although we think it is demonstrated by the observations of Dr. Lee, that all the phenomena depend on certain changes which take place in the Graafian vesicles at each monthly period.—*See Cyclopædia of Practical Medicine, article Ovaria.*

Menstruation, it is said by some, keeps and preserves the uterus in a state fit for impregnation. If so, how do women fall with child who have never menstruated? And it is a subject of daily observation, that women who are suckling become pregnant though they have not menstruated since the former conception.

Our author is of opinion that menstruation sometimes takes place during pregnancy.

"Although during the child-bearing period of life, women menstruate, this action is entirely arrested during pregnancy and suckling, there being, however, exceptions to the general rule. Some women menstruate during the first months of gestation, nay, perhaps, in some rare instances throughout the whole process; in most cases, however, it ceases, and also ceases during suckling, though in the latter process, it is not unfrequently renewed at the end of ten or twelve months, although the suckling be continued still; and hence we must not hastily conclude that a woman is not pregnant, merely because she menstruates, for although doubts, may be raised respecting the continuance of the catamenia during the whole term of gestation, yet I have repeatedly met with cases of pregnancy, in which the catamenia have continued to flow during the first two or three months;* indeed, this, notwithstanding Denman's assertion to the contrary, may, I think, be looked upon as by no means very uncommon." 53.

As the deciduous membrane coats the inner surface of the uterus, and the us uteri is closed with a plug of thick jelly, it is difficult to understand how this can take place. If it is real menstruation, it must be from the upper part of the vagina or cervix uteri. Further investigation upon this subject is required.

---

* This militates against the idea that menstruation depends upon certain conditions of the Graafian vesicles.

The second section contains a history of the phenomena of conception and impregnation.

The researches of Dr. Haighton on this subject are known to all. Dr. Blundell has also made laborious investigations into this department of physiology, and has determined several points which were before doubtful.

His experiments on rabbits, to prove that, in the animal at least, the contact of the male semen with female ova was necessary for fecundation, are well known, and are to be found in the second volume of this series, pp. 408. We shall give the inferences which Dr. B. has drawn from his experiments:

> "First:—From these experiments we may infer, that in the rabbit, corpora lutea may form independently of the full excitement of the generative actions, and, therefore, that in this animal they are not the certain evidences of impregnation. By the corpora lutes, I understand those appearances, which, when impregnation is effected, seem to shew themselves invariably in that part of the ovary from which the rudiments have escaped.
>
> Seconly—We may also infer, that mere absorption of the semen from the vagina by means of the lymphatics, is insufficient for the purposes of formation. In one of the vaginal experiments, the access of the semen to the rudiments being intercepted, impregnation could not be accomplished, though the animal admitted the male as many as fifty times, mostly at intervals of two or three days, or more. This doe, a remarkable fine one of her age, was a great favorite with her polygamous husband; but it appeared, after death, that notwithstanding all these attempts, no fœtuses could form—the corpora lutea were generated—the wombs were involved—the water, as usual, collected in the uterine cavities. But this was all—the access of the semen to the rudiments was intercepted at the top of the vagina, and impregnation could not be effected. Yet it is evident that much of the male fluid must have been deposited in the vagina, and absorbed by the veins or the lymphatics." 64.

Dr. B. is of opinion that the fecundating rudiments meet not in the ovaria. nor in the fallopian tubes, but in the uterus.

But we find it impossible to glance at a fiftieth part of the volume before us, without occupying the space of two or three long articles in our Journal. Considering, too, that the substance of these lectures has long ago circulated widely among the profession, through the medium of our contemporary the Lancet, we deem it unnecessary to attempt anything like an analysis, while criticism would be just setting the opinion of an anonymous writer against that of an acknowledged name. We shall merely remark that the text and the notes form a mine of gold—a treasure of literature, science, and practical knowledge, for the student, which it would be suicidal madness in him to neglect, or fail to have constantly in his possession for reference.

There is a section, however, towards the close of the work, which we are unwilling to pass unnoticed:—it is termed—

## HIDROSIS, OR HIDROTIC FEVER.

This, though not a frequent disease, is considered by Doctor B. as one of considerable importance. The severer varieties are dangerous—and the malignant types almost invariably fatal. It sometimes commences even before parturition has taken place, but more frequently during the first eight or nine days after delivery.

> "The disease opens usually, if not always, with a shudder more or less severe, and so far resembles puerperal and other fevers: sometimes the shudder is slight, lasting for three or four minutes only, and attracting but very little attention, while in other cases the patient may shake, as if she was in the ague fit. In general, this shuddering is accompanied with a sensation of cold, which is occasionally intense; while in other cases, the feeling of coldness is slight or perhaps wanting altogether; and I have been told by the attendants, that the patient had exclaimed—'I am so cold,' and called for more covering, though the flesh has felt warm to the hand of the nurse.
>
> The shuddering and the feeling of coldness are not always in proportion to each other: thus, the patient may shake violently, the sensation of cold being slight, or, she may complain much of the cold, without suffering a smart attack of the shudders: as in cases of puerperal fever, so also in this disease, there is sometimes only one attack; but we may observe occasionally, three or four occurring at uncertain intervals of hours or days—nay, in the same patient, where the disease continues in its lingering form for a period of several weeks, there may be a great many rigors, and this may now and then tend to observe the quotidian period, though the patient may suffer two or three attacks in the course of a day, at irregular intervals. In this disease, further, there is more or less disposition to sweats and heats, combined, which constitutes a very characteristic symptom. These sweats are, I think, at first more fluid, but they afterwards became more clammy, especially towards the close of the disease, during the last few hours. In some cases we find them to be sparing, while in others, especially in the more malignant varieties, they are surprisingly profuse. But whether they are sparing or copious, fluid or viscid, they are never critical—that is, they do not remove or effectually relieve the disease, to the great disappointment of the practitioner, and they may, I think, be not inaccurately described as *sweats of distress* in the system." 772.

The rapidity of changes in the pulse is remarkable. From 90 it will suddenly rise to 140 or 150, without any evident cause. Upon the whole, it is very unlike the pulse of puerperal fever, in any thing but its frequency.

> "In hidrotic fever, there is not unfrequently a morbid state of the nervous system, which shows itself in a certain quickness of manner, a rapidity of utterance, or a disposition wayward, pettish, or passionate. Sometimes, also, the patient becomes the subject of whimsical impulses, either of a comic or tragic character, so that there is an evident tendency to puerperal mania, which may ultimately, though not generally occur. On the other hand, the patient's manner is now and then marked with a sort of forced calmness, and in some cases there is no very obvious disorder of the nervous system, for these symtoms are not constant." 773.

The lacteal secretion is often disturbed: being suspended or changed There is sometimes very little pain in this fever; but, in one stage or other, there will usually be felt uneasiness about the pelvis:—occasionally in other parts. Tympanitis and sub-tympanitis not unfrequently occur in this fever, especially towards the close of the disease. The blood is sometimes greatly inflamed—sometimes very obscurely so. It terminates by resolution, collapse, or conversion into some other affection.

> "Sometimes, in the milder form especially, the disease is brought to its

> close by a gradual retreat of the symptoms, so that day after day it gets milder, till the patient ultimately gets well. But in the severer forms of hydrosis, even those varieties of it which do not appear very formidable at the outset, there is, I suspect, always a pertinaceous tendency to collapse, the strength sometimes giving way very rapidly; say, in the course of a few hours; as if the patient had been poisoned. While in other cases, though the system holds out for three, four, five, or six days; yet the powers are at length laid prostrate, and the patient at last sinks. The complete collapse is marked by the usual symptoms —a pulse of perhaps 117 a minute, small, and easily stopped by compression— a corpse-like coldness of the hands and feet—breathing more or less laborious, sometimes very much so; and occasionally a tympanitic affection of the abdomen.
>
> When the disease terminates in the third mode (if termination it can be called,) it is converted into some other affection, and the patient is assailed with puerperal mania, abscess of the breasts, phlegmasia dolens, &c.; the form and seat of the affection changing, although the nature of it probably remains the same." 774.

Dr. B. divides the hidrotic fever into no less than seven varieties—the ultra-malignant—the malignant—the acute—the lingering—the mutable—the fugaceous—the remittent. We confess that these subdivisions appear to us rather superfine. The splitting of diseases according to their *degrees of severity*, has always seemed to us a very difficult mode of distinction. The mere plus vel minus of intensity in a disorder is any thing but an accurate, or at all events, practicable diagnosis. As no two cases of typhus fever, for example, will be found precisely alike, in severity or even in duration, and as more than fifty millions of men have had typhus, we might thus be justified in dividing fever into fifty millions of varieties. Our author, however, dedicates a section or head to each of the seven varieties of hidrosis, for which we must refer to the book itself. The description of the seventh variety will shew that the distinctions in question are not very stable in their foundations.

> "There is, too, a seventh variety of the hidrosis, the intermittent or remittent. *I suspect, that this variety of the disease is in nature different from the genuine hydrosis, but am not yet determined on the point;* sometimes there is a single paroxysm only, consisting of chill, heat, and sweat; probably identical with the weed, or ephemera so well described by Burns. In other cases, we have repeated paroxysms occurring at irregular intervals, two or three times in the course of the day, and this for days together, or there may be repeated attacks which observe the quotidian period, and regularly commence with a chill. Perhaps the two last variations here mentioned, the quotidian I mean, and the irregular, may be referred to a form of the disease already considered; namely, the lingering hidrosis." 781.

In all these varieties, our author *suspects* that the "patients are liable to attacks of retching and vomiting, with bilious diarrhœa—while the lochia are pale, offensive, and sometimes suspended." We hardly suspected such loose statements from a man like Dr. Blundell, after the minute manner in which he handled the subject of diagnosis.

In respect to etiology, our author seems to think that parturition is the great predisposing cause—that it is connected with failure of the mammary secretion, though not, perhaps, invariably so—that flooding, whether before or after delivery, has a tendency to induce the disease—that the induction of premature delivery has a similar tendency, together with the rude detachment of the secundines. He suspects, too, that lodgement of putrescent pieces of the placenta has given rise to hidrosis.

> "As to the more immediate cause of hidrotic fever, my mind is in doubt. Some varieties of it at least, especially the lingering and the mutable, appear to arise from the inflammation of the veins of the uterus, so well investigated by Dr. Robert Lee. Upon this hypothesis several of the phenomena may, I think, be explained; and that correspondence is the more remarkable, as this supposition has in no way whatever influenced the characters which I have given of the disease, as they had been all marked out, more or less distinctly in my adversaria, before I was acquainted with his valuable labours in this part of morbid anatomy." 783.

It may be distinguished, he observes, from typhus by its connection with delivery—by the characteristic sweats which do not prove critical—by its running its course sometimes so rapidly, say, in three or four days—by the absence of black crusts or aphthous redness so frequent in typhus—and by the general aspect, which is altogether different.

> "From puerperal fever the hidrotic fever may be distinguished in the variableness of the pulse, which is remarkably observable in some hidrotic cases. as well as in the bounding, and softness, and roundness which is sometimes observed in the obscurity of the abdominal symptoms, which are certainly not prominent nor perhaps essential in the characteristic sweats, and perhaps, I may add, the general warmth of the body; in the failure or total suppression of the milk; in the milder cases, in the lingering duration of this disease, which even in the acuter form may last five or six days, and then prove fatal; also under some varieties of hidrosis in the first attack of the disease. not commencing till the fifth or sixth day of delivery, in the formation of a thick white crust on the tongue, (and under the mutable variety) in the disposition to the attack of other diseases already enumerated." 784.

The prognosis is, upon the whole, unfavourable, and but little is said as to the treatment. In the malignant and ultra-malignant varieties, he fears that little can be done by medicine. In the latter variety the patient gives way as rapidly as in cases of virulent poison or malignant cholera. Stimulants are indicated—and in the malignant form he queries venesection and calomel. In the third variety, (acute hydrosis,) he would be inclined "to throw in mercury immediately," keeping the head cool, the feet warm, the bowels open, and the liver in action.

The few specks which we have noticed on the face of this fair volume were scarcely deserving of censure or criticism. The defects and the errors are probably fewer than in any other work of equal extent and importance in the English language. This is no mean praise, but it is well earned Dr. Castle, the editor, has done his duty with care and judgment. The notes are often copious and judicious, referring to many recent authorities which the lecturer, in the ripeness of experience and in the turmoil of avocation, had probably neither leisure nor inclination to consult. We need scarcely add that the work, as it now stands, will be a class-book, not only for obstetric students, but practitioners of every grade and distinction.

## THE CONCOURS—CLINICAL CHAIR OF SURGERY, PARIS.

1. PARALLELE ENTRE LA TAILE, ET LA LITHOTRITIE. Par *P. F. Blandin.* Octavo, pp. 167. Paris, 1834.
2. DES HEMORROIDES, ET DE LA CHUTE DU RECTUM. Par *A. Lepelletier de la Sarthe.* Octavo, pp. 168. Paris, 1834.
3. DES DIVERSES METHODES, ET DES DIFFERENS PROCE'DE'S POUR L'OBLITERATION DES ARTERES, &c. Par *I. Lisfranc.* Octavo, pp. 154. Paris, 1834.

THE above are the titles of three of the Memoirs presented by the Candidates for the Chair of Clinical Surgery, at the late Concours held in Paris; the other two have not yet been sent to us, and we regret this the more as that of M. Velpeau, the successful candidate, is one of these.

M. M. Blandin and Lisfranc are hospital surgeons in Paris; the former is attached to the Hôpital Beaujon, and is favorably known to the profession by his treatise on abdominal effusions, and by his larger work on topographical anatomy; the latter is the surgeon-in-chief to the Hôpital de la Pitié, and for many years has enjoyed perhaps the most extensive reputation of any teacher in Europe, as an able lecturer on surgical anatomy. The subjects of the memoirs are of great practical interest, and as it cannot fail to be instructive to the medical public to be made acquainted with the sentiments of those who are justly celebrated for their talents and research, we intend devoting a few pages to the examination of two at least of these memoirs, the first and the third; the second, namely, that of M. Lepelletier, we regret to be obliged to declare is of very inferior merit.

### I. ON LITHOTOMY AND LITHORITY.

It is really quite amusing to read M. Blandin's descant on the "grandes difficultés" which environ his labours on every hand. The subject which has been imposed upon him is, we are told, "immense," and "d'une étendue effrayante," and would require "d'enormes folios" to do it justice. How then is it to be expected that even he can, in the course of nine days, (the term, it seems, allotted by the Concours for the "getting up" of the essays of the candidates,) achieve a work which demands many months, if not years, for its right execution? With the assistance of "ces flambeaux si precieux," synthesis and analysis, we are led through the gloomy mazes of the vast profound, under the guiding direction of our learned author; but in order to reach this happy end, we must first submit to wade through upwards of thirty pages of a "developpement historique" of the operations of lithotomy and of lithotrity. What the history of the operations has to do with the comparison of their respective merits we must not, we suppose, presume to inquire. At the very threshold of our journey we encounter these words; "there are few branches of human knowledge which need more lengthened and varied labours than does lithotomy," an announcement almost as formidable to the poor reader as the inscription "per me si va per citta dolente" over the portal of the Inferno was to Dante; for "this operation, the ne plus ultra of surgical dexterity, from the time of the ancient Egyptians down almost to the present day, has baffled the ablest efforts of men of all countries to bring to a state of comparative perfection." M. Blandin commences, as in duty bound, with the Coan Sage, and tells us that he somewhere in his writings recommends that no one should be permitted to cut for the stone, unless he applied himself exclusively to this *trade*. After Hippocrates, we are introduced to Ammonius, and then to Celcus, who, we are informed, anticipated Baron Heurteloup in his lithotritic inventions.

Our readers would not thank us for telling them of the apparatus, minor and major, and of the various methods in which different authors have practised the "taille lateralisée," or lateral* operation of lithotomy. Even M. Blandin admits that "on n'espere certainement pas que nous fassions ici l'histoire des voyages de Frere Jacques de Besançon à Paris;" for our part, we should answer not. The bilateral operation invented by Celsus had ceased to be heard of, until M. M. Chaussier and Ribes, in 1805, recalled the attention of the profession to its merits. It has subsequently been much improved by Dupuytren, who has contrived a double-bladed lithotome, to divide both sides of the cervix of the bladder at the same time. The object aimed at in the bilateral, as also in the quadrilateral (proposed by M. Vidal de Cassis in 1825) operations is the making of an opening into the bladder for the extraction of large calculi, without extending the incision much beyond the prostate, and without the consequent hazard of the division of the venous plexuses of the neck of the bladder, and of the sheath which surrounds them; for it has been to this accident that some of the most alarming effects of lithotomy, such as the effusion of the urine into the cellular texture, the formation of confined abscesses, and the establishment of fatal phlebitis, have been generally, and we believe correctly attributed.

At page 24 of the "Parallele," commences the "developpement historique" of lithotrity; and as a matter of course it is prefaced with some French persiflage about the "rapidité toute magique et à peine croyable," with which the operation has been brought to perfection; "jamais invention humaine n'a marché d'un pas si precipité dans la voie de progrès; mais aussi quelle autre invention a eu plus d'importance?" We find that some very distinct allusions are made to lithotrity in some old authors; thus Benedictus, in 1533, uses these words—"aliqui intus sine plagâ lapidem conterunt ferreis instrumentis," and Sanctorius, in 1580, writes—"specillum sagittatum immittit chirurgus et calculum dividit." Paré Hildanus, and others describes forceps "a trois branches," for extracting calculi from the urethra, and even from the bladder.

---

* It is worthy of notice, that what is called by the French the "taille laterale" is very different from our lateral operation, which corresponds with their "t. lateralisée." In the former, the lateral portion of the cervix, or bas-fond of the bladder is opened at once, without dividing the membranous portion of the bladder, or the prostate gland. M. Blandin condems it as the most imperfect of all the operations of lithotomy.

According to Blandin's account, the merit of having brought lithotrity into notice of late years belongs to M. Gruithuisen, a Bavarian physician, who was engaged in endeavouring to realise the proposal of M. M. Vauquelin and Fourcroy to dissolve urinary calculi by introducing menstrua into the bladder. He had contrived an instrument to seize the stone, and to bore it in several places, with the view of subjecting it more effectually to the action of the solvent. In 1819, M. Eldgerton contrived an instrument which opened into two parts or blades, with which the calculus was to be seized, and then it was subjected to the action of a file. Our author shews his good taste in not venturing to decide on the comparative claims of his cotemporaries, Civiale, Amussat, and Leroy d'Etiolles, to the priority of certain inventions, and he merely says that ever since the second of these surgeons proved more distinctly than had been done before, that the bladder may be reached with great ease by straight sounds, the great impulse to all the subsequent improvements of lithotrity may be traced.

By a singular coincidence, M. Amussat and M. Leroy presented to the Academy on the same day, viz. 13th June, 1822, instruments which they had contrived for perforating and crushing the stone in the bladder. Since that date Baron Heurteloup has done much to perfect the instrument proposed by Amussat, and he has also invented some of his own. This ingenious surgeon has the high merit of having introduced the latest, and perhaps the most valuable improvement of the operation: we mean that of crushing the stone by percussion, just in the same way as we should break a pebble with a hammer. Did our limits permit us, we should have alluded to the labours of several other zealous surgeons; but we must hurry on to the third chapter, which will not however detain us long; it is headed, "Parallele Historique entre la Taille et la Lithotritie!!" And now we have a second edition of some common and schoolboy-like remarks on the snail-pace of the progress of the former, and on the giant strides of the latter from its birth to the maturity of its manhood. What with the "progrès immense," the "ingenieuse activitié du monde chirurgical," and something about the "cendres des inventeurs de la cystotomie," and the "berçeau de l'humanité," we are quite bedazzled with the brilliancy of M. Blandin's rhetoric, and are apt to forget its subject-matter. Quite Frenchman-like. he must have a passing allusion at some prurient details; and we are therefore gravely informed that among the causes which retarded during many centuries the improvement of lithotomy, may be mentioned that prejudice which the chaste Abulkasem alludes to in these words:—"quand une femme avait la pierre, il faillait appeller une matrone, parcequ'aucun homme n'avait le droit de porter les yeux sur les organes genitaux du sexe." Our author adds, "heureusement pour les femmes aujourdhui ce ne sont pas des matrones qui les debarassent de leurs calculs."

The next chapter is occupied with a comparison of the two operations in regard to the pain suffered by the patient at and after their performance, and M. B. comes to the conclusion that, on the whole, lithotrity is in most cases attended with more pain than the cutting with the knife. The introduction of the large sound along the urethra is often very difficult, causing most severe pain, especially at the entrance of the canal, (which it is occasionally necessary to enlarge with the knife,) and at the neck of the bladder, and a copious hæmorrhage has in more instances than one been the result; then, again, the manœuvre of seizing the calculus or its fragments, and the subsequent operation of crushing them is, even in the most practised hands, not devoid of suffering: to these sources of distress we must add the longer time necessary for the performance of the operation, and the repetition of the séances necessary for its completion. It is, however, but candid to admit that the pain of introducing the full-sized sound may be much diminished by dilating the canal gradually for several days or weeks previous to the operation, and that the subsequent manœuvres are generally performed with admirable dexterity by that prince of lithotritists, the Baron Heurteloup. What Hippocrates said of lithotomy ought to be transferred to lithotrity, viz. that it is an operation to be attempted only by those who devote themselves exclusively to its performance; and certainly, from what we have witnessed, we are decidedly of opinion that it can never be made an operation which the general surgeon will be able to undertake with as much confidence as he does lithotomy. This, however, ought not to be regarded as any substantial objection to its introduction, as a substitute for the use of cutting instruments in numerous cases of urinary calculus. M. Blandin is of opinion that the very consequences of the incisions of lithotomy are often useful to the final recovery of the patient;—the long gorged and irritated vessels of the bladder are relieved by the hæmorrhage; and hence catarrhs and even indurations of its mucous surface are not unfrequently got rid of, after the recovery of the patient from the immediate effects of the operation; whereas, after a successful lithotrity, a sense of uneasiness and a tenderness in the hypogastric region, enuresis, and pain in voiding the water, which may continue to be at the same time glairy, or even bloody for a considerable time, are common sequences. It may, however, be replied to this objection, and we admit that the answer is satisfactory, that if lithotrity be performed in the early period of the disease, when the calculus is small and the bladder quite healthy, no such disagreeable results are ever known to occur.

The minute details which M. Blandin has thought proper to enumerate, respecting the various accidents which attend and follow the operation of lithotomy, are misplaced in a "parallele" or comparative review of the merits of the two operations. It is not necessary for us to state that a troublesome and even alarming hæmorrhage may be caused by the division of the veins of the bulb, and of the cervix of the bladder, or of the transverse artery of the perineum, or of the internal pudic itself, of which a memorable example occurred in the practice of M. Roux in 1822, when the operator succeeded in arresting the hæmorrhage by tying the trunk in its course along the inner edge of the tuberosity of the ischium.* We are pleased to observe that our intelligent author disapproves of making the internal incision extend beyond the limits of the prostate; his rule is "aller jusque vers les limites de la prostate, mais ne les despasser jamais." The most skilful lithotomists in this country appreciate the justness of the observation; and our readers may be benefited by re-perusing the valuable remarks of Sir M. Brodie on this subject, in one of our late numbers. The other accidents, such as wounding of the rectum, of the peritoneum, (especially in the high and in the recto-vesical operations,) of one of the vesiculæ seminales, or a vas deferens, of the extremity of the ureter, and, above all, of the superior perineal aponeurosis, (fascia pelvia of Cloque,) are of occasional occurrence. We have pointed particularly to the division of the perineal fascia, because it is by avoiding this sheath, that we steer clear of most of the other evils, as well as of that very fatal one, the infiltration of the urine into the surrounding textures. The importance, therefore, of not prolonging the incision of the neck of the bladder beyond the limits of the prostate gland, (which is invested outwardly with the fibrous lamina,) cannot be too strongly urged. It may be said that when the calculus is large, the wound is apt to be lacerated, during its extraction; and so it certainly may be sometimes, if no modification of the common lateral operation, such as nicking the edges of the vesical incision, or adopting the bilateral method proposed by Dupuytren, be had recourse to; but the scientific surgeon will shew this superiority over the mere "handworkman," by accommodating the circumstances of the operation to the peculiarities of each case.

---

* A few remarks on secondary or consecutive hæmorrhage after lithotomy are deserving of notice, as their correctness is warranted by the authority of M. Cruveilhier. According to this very eminent pathologist, one of the most frequent causes of this species of hæmorrhage is inflammation of, and the consequent suppuration within the divided bloodvessels. The coagulum becomes detached from the internal surface, and there is then no obstacle to the discharge of the fluid blood. In such a state of the parts, the application of a ligature may probably be of no avail, as the parieties of the vessels are soft and easily lacerable; and even cauterization, and the plug, although preferable to the ligature, will in many cases be equally inefficacious.

Certain it is, that one of the most frequent causes of death after lithotomy is the infiltration of urine into the cellular sub-peritoneal tissue around the neck of the bladder and in the perineum; and it is equally certain that this very fatal accident may be generally traced to a too free incision of the neck of the bladder, or to the internal and external incisions not being made in the same line and direction. The precept of M. Lisfranc is "à inciser les parties molles perineales, depuis le col de la vessie jusqu'à la peau, dans une etendue au moins egale, superieure même, s'il est possible, a l'ouverture que procure le debridement du col de la vessie."

There is a consecutive accident, which is of more frequent occurrence, in M. Blandin's opinion, than has been hitherto supposed; namely, inflammation of the veins at the neck of the bladder. He has detected it in six cases, since his attention was first directed to the inquiry. These veins and also those of the perineum are numerous, some of them large, having a semi-erectile texture, and so lodged in and confined by the perineal aponeurosis, that when divided, they remain with open mouths, and are therefore more apt to be exposed to the irritation of the air from without, and of the urine as it flows out of the wound.

One species, or, perhaps more correctly we should say, specimen of perineal phlebitis, is the inflammation of the erectile tissue of the urethra; for all erectile tissues are essentially venous in their formation. When the bulb becomes inflamed, the venæ dorsales penis, and also those of the prostatic plexus, very frequently become similarly affected, indicating thus the character of the original mischief.

Our limits permit us only, en passant, to allude to fistulæ in the perineum as one of the occasional evils attendant on lithotomy, and equally brief must be our notice of the ischuria, and more frequently the incontinence of the urine which sometimes follows. We must now proceed to enumerate some of the more frequent accidents which may be induced by the operation of lithotrity; and we shall probably be tempted to describe these at greater length, as the results of this operation are far less generally known to the profession than the dangers of lithotomy. M. Blandin enumerates no fewer than thirteen, viz. alarming nervous symptoms, inflammation of the urinary passages, of the prostate, of the vesiculæ seminales, of the peritoneum, of the veins of the pelvis, injury of the mucous coat of the bladder and hematuria, perforation of the bladder, infiltration of urine, retention and incontinence of urine, urinary fistulæ, the breaking of some of the instruments within the bladder, and, lastly, the reproduction of the calculus. Not one member of this catalogue, however can be charged as peculiar to lithotrity; but yet it is well to know, that all of them have been known to occur. We shall subjoin a few illustrative remarks, but have not room to insert the cases reported in our author's treatise. The sensibility of the urethra and bladder is in some calculous patients so extreme, and the agony produced by the introduction of large-sized instruments so great, that very serious accidents may be produced if we persevere in our attempts. A case, which occurred in the practice of Leroy d'Etiolles, is alluded to. The man died on the 4th day, after an attempt had been made to seize the calculus with the "brise-pierre" of M. Heurteloup. And in Larrey's report on the account of calculous patients treated by M. Civiale at the Hôpital Necker, we observe that one of them was seized with alarming nervous symtoms after the first séance had been undergone, and died on the third day afterwards.

A much more common source of danger is the inflammation of the urinary passages; this indeed is the capital objection to lithotrity; as it can scarcely ever be performed, even in favorable cases, without being followed by a certain degree of inflammatory irritation of the urethra and neck of the bladder: hence the frequent desire and painful efforts to make water, and the mucous turbidity of this secretion, after each séance. Whenever this irritation exceeds a certain degree, the safety of the patient demands that the operation be not repeated for some time. In some cases, in addition to the local symptoms, we find that the constitution sympathises so much, that a sort of nervous fever, attended with extreme depression of the vital powers, comes on; and in other cases, the inflammation has been known to extend in the ureters and kidneys, an event of very alarming danger.

Phlebitis of the neck of the bladder is not of such frequent occurrence after lithotrity as it is after lithotomy. The following, however, is an example which happened in M. Blandin's own practice. A middle-aged man had, in a foolish moment, introduced into his urethra a stalk of long grass, the end of which broke off in his bladder, and gave rise to the formation of a calculus. He went to the Hôtel Dieu, and M.M. Dupuytren and Breschet regarding the case as one favorable for the operation of crushing the stone, remitted him to the care of M. Blandin. The sound detected the presence of several calculi: two were readily crushed by means of the forceps and drill; a third, being much harder, required the use of the bow. While M. B. was using this, the patient on a sudden made a violent struggle, and shrunk back so much from the instrument, that its extremity was drawn within the urethra; fortunately, the calculus had by this time been crushed, and the blades were closed, else the neck of the bladder must inevitably have been lacerated. M. Blandin candidly confesses that he had omitted to secure the body of the patient to the bed with the shoulder-strap. Two other séances were successively undergone, and several calculi crushed and discharged; but unluckily a fragment of one larger than the rest became impacted in the membranous portion of the urethra, and could not be dislodged; and, although it did not much obstruct the passage of the urine, it prevented the introduction of any instrument into the bladder. Things continued in this state for several days, when the patient, upon leaving a warm-bath, caught cold, and was seized with a violent pneumonia, which speedily proved fatal. On dissection, the calculus was found in the membranous portion of the urethra, which, as well as the prostatic portion, had become much inflamed; the adjacent veins were found to contain pus; numerous small abscesses were observed disseminated through the substance of both lungs;—a score, at least, of small calculi were found in the bladder.

The injury of the mucous coats of the urethra and bladder was certainly of more frequent occurrence, when the forceps "a trois branches" was generally used, than it has been of late. This accident is, as we may guess, most apt to happen when the bladder is much contracted, and resists distention. Not to talk of pieces of the mucous membranes brought away by the extremity of the litholabe, we may assert with confidence that it is sometimes scarcely possible to avoid including the uvula vesicæ between the branches of the forceps, especially as this little appendage is very often enlarged in calculous patients. The improvements introduced by M. M Jacobson and Heurteloup have however considerably diminished the risk of this accident. M. Tanchore was once witness of a very copious hæmorrhage, which had been produced by laceration of the urethra in attempting lithotrity. The dreadful accident of fairly perforating the walls of the bladder is in the present day, and especially when the instruments for percussion and compression are used, scarcely to be admitted as one of the evils which attend this operation. M. Breschet has related one such melancholy case.

The occasional occurrence of such accidents as urinary infiltration, the formation of urinary fistulæ, and incontinence of urine, need no illustrative remarks; and even the last member in the catalogue of evils, the reproduction of the calculus, may in the present day be almost excluded from consideration.

The following summary is given by M. Blandin of the comparative advantages and disadvantages of the two operations.

1. Hæmorrhage is much more frequent and more alarming after lithotomy than after lithotrity.

2. The rectum, peritoneum, and other important organs may be wounded in lithotomy. These accidents have been known to occur in lithotrity; but not certainly with the present improved instruments.

3. Urinary infiltration is not uncommon after lithotomy;—rare, very rare, after lithotrity.

4. Phlebitis is of infinitely more frequent occurrence after lithotomy than after lithotrity; indeed only one instance after the latter operation is on record.

The same remark is applicable to the accidents of peritonitis and of urinary fistulæ, &c. &c.

The preceding objections are unfavourable to lithotomy; but let us now consider those which may be urged against its rival.

1. The pain and nervous accidents are, on the whole, more severe, more prolonged, and of more frequent occurrence after lithotrity than after lithotomy.

2. Systitis is a more frequent sequence of lithotrity than of lithotomy.

3. The inflammation of the prostate terminating in abscesses, and producing retention of urine and other serious accidents, is "of greater importance" after lithotrity than after lithotomy.

4. The bladder may be wounded in lithotrity more readily than in lithotomy.

5. Lithotrity may be reproached with the risk of the extremity of an instrument being broken off, and left behind in the bladder.

6. The chance of reproduction of the calculus is greater after lithotrity than after lithotomy; but here it is but fair to state, that the statistic reports of M. Civiale are directly opposed to this conclusion.

We have hitherto not alluded to the conditions which may render the one or the other operation advisable or not, in particular cases, and we shall now, therefore, briefly allude to these. As a general remark, we may state that lithotrity is better adapted to those cases in which there is only one or two, than when there are numerous calculi present in the bladder. M. Civiale, indeed, tells us that, in one of his patients, he crushed and discharged no fewer than forty calculi, and M. Leroy has been successful in three cases, in which 15, 20, and 30 calculi had been present. When the calculus is very large, and especially when it is embraced by the walls of the bladder, lithotrity is scarcely admissible; such cases must be left to the lithotomist.* The difficulty of seizing a large calculus without irritating, or even pinching, the coats of the bladder is not the only objection: the length of the treatment, the numerous séances required, and the consequent repeated irritation of the urinary passages, add much to the distress, and even to the danger of the case. The sentiments of M. Blandin on this subject are clearly expressed in the following sentence. "The important point to determine in reference to the adoption of lithotomy or of lithotrity, in cases of large calculi is, whether the patient is able to bear the repetition of numerous séances, and the contingent inconveniences and accidents of these, or the operation of at once extracting the calculus by cutting, with least danger to his constitution. In the present state of our knowledge, I do not hesitate to decide the question in favour of lithotomy."

The flattened shape of a calculus has, we are told, in more instances than one, precluded the removal of it by lithotrity; but it is right to state that, in the two cases adduced in illustration by M. Blandin, the bladder was unsound in both patients; and, moreover, that the perforating, and not the percussing, instruments were employed by the operator. Some of the calculi of the oxalate of lime are of such extreme hardness, that they resist all attempts to break them with the most approved lithotritic instruments; our author has met with one case of this kind, and reports another from the practice of M. Guersent. Having thus briefly alluded to the varying conditions of the calculi themselves, as they may influence the decision of the patient or surgeon, as to the operation to be adopted, our attention is directed next to the conditions of the urinary passages, with the same view and we shall find, that in not a few cases is lithotrity nearly inapplicable: when the calculus is at all impacted into the opening of the urethra, or encysted—or when there is a strictured state of the urethra—or when the bladder is affected with paralysis (and, therefore, has no power to expel the debris and fragments), or when it is much thickened, and in a catarrhal, or very irritable state—or when the prostate gland or uvula vesicæ is much enlarged, lithotrity is not to be recommended. By far the most important of these morbid conditions to be attended to, is that in which the bladder is extremely irritable, and there is an evident tendency to inflammation, either of it or of the kidneys; under such circumstances, the cutting operation is the safer of the two, as the attendant hæmorrhage not unfrequently relieves that condition of the system on which these accidents generally depend. With respect to the existence of paralysis of the bladder, in calculous cases, it deserves notice, that Professor Roux has met with several cases, in his own practice, where the loss of nervous power returned soon after the stone had been extracted by lithotomy.

---

* In our last Number, indeed, there is a notice of a successful operation by Mr. Costello, of London, in a case in which the calculus was very large, being 3¼ inches in its long, and 2¾ inches in its short axis.—REV.

The last set of circumstances to be considered, in reference to the two operations, is that which respects the age, sex, and constitution of the patients.

For very obvious reasons, lithotrity is not well applicable in young children, and the rule laid down several years ago, by MM. Dupuytren, Roux, and Amussat is probably near the truth viz. "jusqu'à douze ou quinze ans environ, les calculs vesicaux doivent etre le plus souvent traités par la lithotomie;" the irritability of the bladder, its small antero-posterior capacity, the narrowness of the urethra, and the difficulty of confining the young patient, are all so many unfavourable circumstances. To shew, however, that lithotrity may be performed with success at very early periods of life, we may direct our readers to a report of some cases, recently presented by M. Segalas to the Academy of Medicine. In advanced life, the urinary bladder, provided it is healthy in the texture, is in the most favorable condition for the operation of lithotrity; it has become more capacious and much less irritable, and less disposed to be affected with inflammation, and, moreover, the urethra has become so much dilated, that the requisite instruments may be introduced with comparative facility. Hence it is, that by far the greater number of cases on record have occurred in elderly patients: thus, out of 38 reported by M. Heurteloup, 23 were in patients from 60 to 80 years of age. In only one of these patients was the operation fatal.

As to the constitution of our patients, the remarks of M. Blandin are extremely pertinent; he gives the preference to lithotrity (barring any important objection) whenever the system is very highly nervous, and the mind is much depressed and alarmed at the idea of being "cut," and he alludes to some melancholy cases, wherein lithotomy had been very speedily followed by death, apparently from the mere shock of "mental perturbation, and without any serious corporeal lesion." It is proper, however, that the surgeon, for the sake of his own character, as well as for the safety of his patient, should always bear in mind the practically-important fact, that the chances of success of lithotomy are considerably impaired, if the operation be performed after previous attempts to remove the stone by lithotrity. Much sagacity, discrimination, and calm resolve are, therefore, requisite, under the circumstances we have been alluding to.

We have left little space to enter upon any tabular comparison of the two operations drawn from the registers which hitherto have been made public. At best, this method of arriving at accuracy of conclusion is more specious than trustworthy. It may possibly be thought by some, that if the lithotritist can display a greater number of successful cases, out of a given number operated upon, than the lithotomist, the question of inquiry is at once settled; but not so—the cases may not be similar and equally favorable: the lithotritist generally selects those which he deems to be accommodated to his operation, and rejects the others, which are then entrusted to the odrinary surgeon. Besides this, it has occurred in more than one instance, that lithrotrity has been attempted, but has failed, and that the cure of the patient has then been effected ultimately by the cutting operation. These considerations must, therefore, be taken into account, in discussing the mere question of the comparative merits of the two operations: but, after all, they interest rather the speculative disputant than the man engaged in practice.

If we collect the cases of lithotomy reported by F. Cosme, Douglas, Cheselden, Dr. Marcet, and those which stand on the books of the Hôtel Dieu and of the Charité Hospital, from the year 1720 to 1727, an aggregate of 1431 operations, performed in different countries and after different methods, (and be it recollected, these methods not so approved as those now practised), is obtained; and of this number, we find that 1085 were successful and 346 fatal, being in the proportion of one death in rather more than three of the cases. Now let us compare this estimate with the results of lithotrity, as far as we can ascertain them from the work of M. Baucal, the report of MM. Larrey and Double, on the Comptes-rendus of the Hôpital Necker by M. Civiale, in the years 1831–2–3, and from the Memoirs of Baron Heurteloup:—These various sources furnish us with a catalogue of 124 cases of lithotrity, performed, indeed, not in the same, but after different methods. Of this number, we find that 86 patients were cured, 30 died, and 8 remained unrelieved; the proportion of deaths is, therefore, one in rather less than every three cases operated on. Hence it appears, that lithotomy has a decided advantage over its rival; and this advantage will be found to be more conspicuous, if we compare the more recent registers of lithotomy cases, such as those reported in the Leçons Cliniques of Dupuytren, and in the works of Belmas, of Vacca Berlinghieri, and others, with the above aggregate of lithotrity cases: the proportion of deaths being less than one in four patients; and it is worthy of especial notice, that among the 537 cases drawn from the last mentioned sources, there were a good many of the high operation, and also several in which lithotrity had been unsuccessfully attempted. As our only motive in giving these details is the wish to arrive at truth, it is a duty which we owe to Baron Heurteloup to state that the results of his experience, since he contrived and adopted the percussing or hammering instruments, have been greatly more successful than those of M. Civiale, as detailed in the report of the Hôpital Necker, already alluded to. The splendid success of effecting cures in 37 out ot 38 cases, is a proud testimonial of the skill and dexterity of the Baron, and forms a striking contrast to the 27 cures, out of 43 cases, detailed in M. Civiale's memoir.

Should lithotrity henceforth be as successful, even in picked cases, as it has lately been in Heurteloup's practice, the most sceptical must admit that, under certain circumstances at least, it must bear the palm from its ancient rival. In conclusion, we may confidently aver—

1. That lithotrity is one of the most brilliant achievements of modern surgery—that it is to be viewed at once as a rival and as "la sœur" of lithotomy; but that it can never supersede it altogether.

2. That lithotrity, if resorted to in all cases, to the exclusion of lithotomy, would very probably be more dangerous and unsuccessful than this last operation has been.

3 That the operation of breaking and crushing a urinary calculus is much more easy, expeditious, and fortunate than that of drilling and boring it; that the former of these methods has been more successful in its results than lithotomy has almost ever been; and that the latter has been less successful than it is usually.

4. That the cure effected by removing a calculus by lithotomy is probably more perfect, and ultimately more complete, than that ever obtained by lithotrity.

5. That we cannot determine what might be the success of lithotomy, if the surgeon was permitted to select his cases, as the lithotritist has hitherto done, and no doubt always will do.

### II. DES HEMORRHOIDES, ET DE LA CHUTE DU RECTUM. Par A. LEPELLETIER de la Sarthe, pp. 165.

This is certainly the least praiseworthy of all these Concours essays; it is not one degree better than the common run of inaugural theses or dissertations; and, indeed, the author seems not to profess to offer his own opinions, but merely to deliver those of other writers. His treatise is, therefore, nothing but a mere compilation, and as we have this already, in such able works as Cooper's Dictionary, and the Dictionnaire de Médécine et Chirurgie, M. Lepelletier might as well have saved himself the trouble and expense of printing 165 pages. Perhaps he thinks that the want of originality may be compensated for by a display of his literary lore; for there is appended to the "omnium gatherum" of his remarks on piles, and prolapsus of the rectum, a list of nearly 300 works on these subjects, commencing, as usual, from Dr. Hippocrates, in the year 400 B. C. to M. Lepelletier de la Sarthe, in 1834. Such being the character of this Essay, we are reluctantly compelled to pass it by; but, perhaps, may extract a few of the reported cases for our Periscopic department.

### III. DES DIVERSES METHODES, ET DES DIFFERENS PROCE'DE'S POUR L'OBLITERATION DES ARTERES, &c. Par I. LISFRANC.

It may be proper to premise a few remarks which M. L. has made on the anatomical structure of the middle coat of the arteries. This coat is composed of spiral fibres, which pass round the tube of the vessel two or three times, and perhaps oftener, although they cannot be easily followed; they are of a yellowish colour and of a dry texture in the aorta and large arteries, and are much redder and moister in the smaller. Some authors have compared this tissue to the muscular, others to the elastic fibrous substance of the vertebræ; perhaps neither description is right. Suffice it for us to say, that the spiral arrangement accounts readily for the property of extensibility which the middle tunic possesses lengthways, and for the power of retraction which it exhibits when the vessel is cut or torn through. It differs certainly from the common fibrous elastic tissue, by the extreme readiness with which it is divided on pressure, whether this pressure be made with a ligature, forceps, or even with the finger-nail. Let us now attend to the internal tunic, which has always been described as a thin, smooth, polished, and transparent membrane—a description which is true, indeed, in the case of the pulmonary artery, but not of the aorta and of its large branches. If we carefully dissect one of these last-named vessels from within, we find, first of all, a thin, transparent pellicle, which lines the vessel—then, exterior to this, is a tissue, hard, dense, and brittle, and which can be raised only in scales or laminæ; M. Margaine has called it the "tunique sclereuse," and described it as a distinct tunic, composed of several foliola, or layers, which are situated between the internal serous, and the elastic or fibrous coats. Now, it is the presence of this coat in the systemic arteries which gives them a greater consistence than the pulmonary arteries, and which causes them to gape, when divided, so much more than these last-named. It is this coat in which the usual morbid changes of arterial tissue, such as the deposition of chalky, steatomatous, cartilaginous, and osseous matter, take place primarily, and the immunity of the pulmonary arterial system from these diseases, is attributable solely to the absence of this peculiar "*nidus.*" When an artery becomes affected with aneurism, the different tunics are more or less changed in their texture and properties: generally they are thickened, softened, and "parsemées" with concretions; the elasticity of the vessel is gone, and, from being unable to resist the extending force of the current of the blood, it becomes gradually dilated, either on one side only, or in all its contour. It is admitted now by almost all pathologists, that sometimes, but not often, the three, or rather, we should say, the four tunics are cotemporaneously dilated. More frequently, however, the internal ones have given way, and the aneurismatic sac consists of the external or cellular coat alone. Without further comment, we now proceed to give a short exposition of M. Amussat's ingenious method of arresting arterial hæmorrhage by torsion. Although this method is applicable chiefly to vessels which have been divided, and gape with open mouths, yet, as it happens occasionally that we designedly cut across a vessel in its continuity, in order to prevent the danger of its bursting, the importance of M. Amussat's suggestion becomes still more conspicuous. Some of the archaiologists of our profession have, with their accustomed intoleration of every thing new and modern, attempted to dispute the claims of this distinguished surgeon to the merit of originality, on the ground that there are a few dark and shadowy hints at similar doings among one or two of the all-learned ancients; but we are not disposed to cavil; and shall leave both the ancients and their advocates "alone in their glory."

If we lay hold of an artery in the dead subject with the forceps, and twist it round in the line of its axis, the spinal fibres of the vessel are first stretched and extended; and, if the twisting be carried further, they become lacerated. If we examine, then, the parts attentively, we shall find that the outer or cellular coat forms a sort of sac, or envelope, which exhibits at its extremity a small knob, "tourillon," formed by the torsion of its parietes; that the middle and inner coats are divided irregularly across, above the point where the forceps were applied; that they are drawn together, detached more or less from the outer tunic, and sometimes are rolled round one on the other within the cavity of the vessel. These are the appearances we observe in the dead body, and the same are to be seen, if the experiment be performed upon the living. Immediately after the operation, we may see the plugged end of the vessel raised or projected at every impulse of the column of the blood, and we are surprised at the complete resistance of the untied orifice. The formation of the internal clot is not long delayed; this clot adheres by its base to the point of rupture and separation of the two inner coats, and the strength of its adhesion appears to be proportioned to the extent of this rupture:—The subsequent changes need not be specified, as they are quite the same as those which are well known to happen after the application of a ligature. There has been some dispute as to the change which the twisted extremity of the artery ultimately undergoes; M. Amussat supposes that it mortifies, or is absorbed, and then leaves exposed the two inner membranes, "refoulées," and firmly glued together; whereas Schrader thinks it more probable that it becomes converted into fibrous tissue.

The operation of torsion of the smaller arteries is very simple; all that we have to do is to lay hold of the bleeding extremity, and twist it several times round its axis; but it is rather more complicated on the larger. M. Amussat recommends that the surgeon be provided with the following instruments—two common forceps, a forceps "à baguettes" (the branches or legs of which terminate in cylindrical rods, which are to be made very smooth, several lines long, and about a line in thickness.) and a forceps "à torsion" (the peculiarity of which is, its being provided with a slide on one of the legs, which moves up and down in a groove on the opposite one, and by which it is opened and closed.) With one of the common forceps we lay hold of the vessel—with the other we detach it from its surrounding connexions, so as to make it project free and unattached for a space of six lines or half an inch; we then exchange this second forceps for the forceps "à torsion," with which the artery is seized transversely, and, while we hold this in our right hand, we seize the vessel, at its highest point of detachment with the forceps "à baguettes" in our left, and by gentle pressure with its blades, we divide the internal and middle coats; then we are to give a slow rotatory movement to the forceps "à torsion," so as to effect the necessary amount of twisting; when this is properly done, we then either gently push back with the forceps "à torsion" the extremity of the artery into the flesh, or cut off the projecting knob, or "tourillon."

The security of this operation depends greatly upon the proper execution of its "deux derniers temps," viz. of the prehension of the vessel with the forceps "à baguettes," and of the subsequent torsion with the forceps "à torsion." If the two inner coats are duly divided across, they retract considerably, so that the forceps has then hold only of the outer or cellular tunic; the retraction of the inner coats causes the puckering up, or "refoulement," which the French authors allude to, and which is increased at each twist that is made of the outer coat. If we press between our fingers the extremity of the artery behind the point of prehension of the forceps "à baguettes" while we keep twisting it, "on sent comme un coin qui chemine et les écarte." When the operation has been properly performed, we observe the end of the vessel exhibiting a knob, or "reflement," rounded "en forme de calotte," and terminating at the middle in a point, which is like a piece of catgut. If we have an opportunity of examining the interior of the vessel at this stage of the process, we find that the inner coats have formed quite an inverted tube, just in the same way as when we have turned the finger of a glove within itself; this tube, being directed against the stream of the blood, would be rolled back by its impulse, were it not for the torsion of the cellular coat, which enables it to afford "une barrière insurmountable."

M. Amussat has made several experiments, to ascertain the power of resistance which a twisted artery offers to a stream directed from within against it; and he has found that, however strongly the injection was forced in with a syringe, the vessel became merely lengthened and distended, and never gave way so as to permit the escape of the fluid. It is to be observed that this perfect resistance occurred in those cases only, in which the "refoulement" of the inner coats had been duly effected, and that, when the torsion merely had been made, without the necessary "refoulement," the injected fluid did sometimes force its way, and become effused in the cellular coat, without, however, having untwisted it.

Some surgeons have thought M. Amussat's directions for performing the torsion of the large arteries too minute and complicated, and, regarding it unnecessary to keep the vessel fixed with a "forceps à baguettes," they dispense altogether with its use; they content themselves with merely laying hold of and drawing out the bleeding extremity with a common forceps, and then, with another (having previously committed the first to the left hand,) detaching its connexions and twisting it, till the inner coats are felt to give way—eight or nine turns are generally sufficient, "car il n'est plus douteux qu'alors la valvule externe (il appelle ainsi le cul-de-sac que forme la celluleuse) ne soit formée de tours de spirales suffisans, qui la rendent propre à resister à l'impulsion du sang." If we do not make a sufficient number of turns or rounds in twisting a large artery, there is considerable risk of hæmorrhage, for "les spirales," being neither sufficiently strong nor numerous may become undone or untwisted (se defont) in consequence of the impulsions of the stream of blood. In the case of the smaller arteries, five or six turns with the forceps are generally sufficient. Before we leave the subject of torsion of the arteries, we may allude to one of the most absurd of all surgical nouveautés: M. Thierry may describe his own dreamings on a particular sort of torsion, applicable only to undivided vessels in their continuity.—"Dans ce procédé, je souleve le vaisseau avec une aiguille des Deschamps, et je m'en sers, comme d'un tourniquet, faisant executer autant de mouvements de torsion, toujours dans le même sens, que l'exige le calibre de l'artère."

M. T. alludes to his operation having been practised by other surgeons; if it has been, there are surely no records, that we know of, of the attempts. The modification of the operation of torsion which M. Amussat himself has suggested, for the continuity of an artery, is much more ingenious and philosophical. Our readers already understand what the French writers mean by the "refoulement" of the inner coats, which is believed to take place in the second step of the operation of torsion, when the open vessel is seized with the forceps "à baguettes;" we shall now briefly explain how M. A. recommends its adoption in the case of an undivided artery:—The surgeon must have two forceps "à baguettes;" he first introduces the blade of one under the exposed and bared artery from one, say the right side, and then introduces a blade of the second from the other, or left side, so that the handles are opposed to each other; the operator holding a forceps in each hand, and bringing the two subjacent blades close to each other, closes both forceps tightly, so as to squeeze the vessel between their blades, for the purpose of rupturing its inner coats; he then, while keeping the upper (nearest the heart) forceps firmly in its place, moves the blades of the lower one obliquely up and down, so as to detach the inner coats from the outer one, and to "refouler les membranes rompues en se dirigeant vers les capillaires." The inversion of the inner coats is to be made always on the side most removed from the heart. In performing this operation of "refoulement," it is necessary that the blades of both forceps should be extremely smooth, for the slightest abrasion of the outer coat might facilitate its rupture, and thus occasion hæmorrhage.

If we examine an artery immediately after the "refoulement" has been performed on it, we find that, at the point corresponding to the point d'appui of the upper forceps, a complete division of the inner coats, and a narrowing of the tube, which is formed now only by the outer or cellular coat; tracing the vessel downwards, we observe the inverted and reverted inner coats, like an irregular cylinder or cone, pointing towards the capillaries, and "du coté du cœur est sa base, espece de petite bourrelet arrondi, que forment les tuniques en se repliant sur elles-memes: tout autour est une petite depression circulaire, point d'union avec la celluleuse, au centre l'entrée du petit tube interne un peu evasée."

"M. Amussat is of opinion that a stream of blood continues to pass along the artery, through the "petit canal central des membranes refoulées," for one or two days after the operation, but that, at the end of the second day, the coagulum is formed, and quite obstructs the current; that, by the fourth day, the coagulum has become complete, and adheres powerfully along the whole extent of the denuded cellular tunic, forming a cone which points away from the heart. The exterior of the artery, where it has been detached from its surrounding connexions, generally exhibits traces of suppuration. When the cure is completed, a "fusiforme renflement" remains at this place; on no occasion has the denuded portion of the cellular coat become dilated or aneurismatic, as we might, à priori, be afraid of—indeed M. Amussat has frequently attempted to induce this diseased state in animals, but has never yet succeeded. The operation of complete "refoulement" has almost uniformly been followed by the obliteration of the canal, in the lower animals; but hitherto a trial of it has not been fairly made on the human subject—the ingenious contriver attempted it once, but, being somewhat afraid of employing the requisite force in the manœuvres upon the artery, the "refoulement" of the inner coats was incomplete, and the tube was not, therefore obliterated.

Although, probably, it may seldom or never be performed, the details of

Amussat's investigations cannot fail to be interesting to the practical as well as to the physiological surgeon. There is still another result of these investigations which remains to be mentioned. We have already explained that an exposed artery, when squeezed between the rounded blades of a forceps "à baguette," has its inner coats divided, while the outer one remains unbroken. Now, if we do nothing more than merely this manœuvre, and leave the vessel in this state, each wave of the blood as it passes along washes the jagged edges of the wounded tunics, and thus preventing the deposition and adhesion of lymph, a coagulum is not formed. M. Amussat has never succeeded in procuring the obliteration of an artery, however many of these "machures," (we are almost obliged to coin a new word—shall we call it "morsion," as opposed to "torsion?)" and in whatever direction they be made. On examining the interior of the vessel, a short time after the operation, he found a number of small cicatrised wounds, which gave the appearance of unevenness and irregularity to its surface.

Similar phenomena are observed after the temporary application of a ligature; and indeed this has all the effects of the "machure" now alluded to. In either case no coagulum is formed, and the results therefore of the operations are imperfect and unsatisfactory. M. Amussat, during his inquiries on this subject, having ascertained that such was the progress of things under these circumstances, was then anxious to determine what changes would take place, if the current of blood along the affected artery was arrested for some time after the "machures" had been made; and for this purpose he put a ligature on the artery below, or on the side of the capillaries.

The carotid artery of a large dog being exposed, he made two divisions or "machures" of the inner coats, two lines apart from each other, and then applied a ligature, two or three lines distant from the lower or distal "machure."

The usual conical coagulum was formed in this case, with its base adhering to the site of the ligature, and its apex towards the heart; but the peculiarity was, that at each "machure" the coagulum adhered by a circular "embranchement" to the edges of the divided membranes. There were therefore here three firm and solid adhesions of the coagulum, and the resistance therefore to the impulsion of the blood was threefold strong. At the spaces intermediate between the different "machures," the coagulum was perfectly free, and so unattached, that a probe might be passed between it and the inner surface of the artery. The truth of this description M. Amussat has verified by numerous experiments. In every case, without exception, has it been found, that the coagulum had formed a distinct and separate adhesion to each "machure." At the end of four days, as the adhesions then are generally firm and well organised, the ligature may with perfect safety be removed, and the wound be then healed as quickly as possible. As yet, no trial of the operation in question has been made on the human subject; but the results on animals have been so uniform, and so satisfactory, that we may fairly anticipate some important advantages from its adoption in certain cases, and perhaps more especially in those in which there is reason to apprehend secondary hæmorrhage, in consequence of some collateral branch being given off by a tied artery, near the site of the ligature. Such is an abstract of M. Lisfranc's observations on the means of arresting hæmorrhage from an open artery, and of plugging up one in its continuity by the operations of "torsion" and "refoulement." Hitherto the subject has scarcely received in this country the attention which it deserves; and we have been therefore induced to extend our review to a greater length than we at first proposed. The rest of M. Lisfranc's Essay can be merely glanced at. The relative frequency of aneurism in the different arterial trunks, and at different periods of life, is shewn in the following Tables. In 179 cases—

| | | | |
|---|---|---|---|
| Artery—popliteal - - - - - | 59 | Artery, Humeral - - - - - - | 3 |
| ——— Crural, at the bend of the groin . . . | 26 | ——— Common iliac - - - - | 3 |
| ——— Crural, at different points, above and below the groin, | 18 | ——— Ant. tibial - - - - - | 3 |
| | | ——— Gluteal - - - - - - - | 2 |
| | | ——— Int. iliac - - - - - | 2 |
| | | ——— Temporal - - - - - | 2 |
| ——— Carotid - - - - - - | 17 | ——— Int. carotid - - - - | 1 |
| ——— Subclavian - - - - | 16 | ——— Ulnar - - - - - - - | 1 |
| ——— Axillary - - - - - - | 14 | ——— Fibular - - - - - - - | 1 |
| ——— External iliac - - - | 5 | ——— Radial - - - - - - - | 1 |
| ——— Brachio-cephalic - - | 4 | ——— Palmar - - - - - - - | 1 |

In 101 cases, in which the ages of the patients are faithfully recorded, we find—

| | | | |
|---|---|---|---|
| 1 case, at - - - | 13 years. | 20 cases, at - - - - | 40—45 years. |
| 3 - - - - - - - | 15—20 | 17 - - - - - - - - | 45—50 |
| 5 - - - - - - - | 20—25 | 11 - - - - - - - - | 50—55 |
| 12 - - - - - - - | 25—30 | 6 - - - - - - - - | 55—60 |
| 24 - - - - - - - | 30—35 | 3 - - - - - - - - | 60—70 |
| 15 - - - - - - - | 35—40 | 3 - - - - - - - - | 70—80 |

An ingenious but fanciful hæmostatic remedy has been proposed by M. Pravas: it is the employment of galvanism and acupuncture together. Since the experiments of Scudamore, it has been very generally known that blood, when submitted to the electrical current, very speedily coagulates; and M. M. Pravas and Guerard were induced to examine the subject more minutely. They have ascertained that, if even the aorta of a rabbit be wounded, the hæmorrhage may, at least for a time, be arrested by the agency of galvanism. "No sooner were the wires applied to the bleeding vessel than a brown coloured clot was formed."

"Is a trial," says our author, "of this innocuous means not deserving to be made on an aneurismatic swelling?" Nothing could be more easy than the introduction of one or more acupuncture needles, and the establishing a current of galvanism through the contents of the sac. The hint is at all events worthy of notice, and may possibly, in some cases, be turned to a useful account.

Even acupuncture alone has been proved by M. Velpeau to have considerable power in inducing coagulation of the blood in the living subject. He introduced a needle into the crural artery of a dog, and found on the fifth day that a firm fibrinous concretion plugged it up completely for the extent of one inch, or thereabouts. This experiment was repeated several times, and the invariable result was, that when the needle or needles were retained in an artery for four days at least a solid coagulum was formed, and an obliteration more or less complete was effected. It is to be remembered that M. Velpeau never experimented on any vessel larger than the femoral of a middle-sized dog.

The subsequent trials made by M. Amussat on the carotid arteries of horses have been less favorable to the success of acupuncturation. He passed four long needles through the carotid of a horse, in different directions, and allowed them to remain in situ for sixty hours. The animal was then killed, and M. A. discovered traces of considerable inflammation around the vessel, on opening which, all the needles were observed to be quite smooth and shining, but there was no appearance of coagulation having ever taken place.

Besides this negative objection, there is the danger of hæmorrhage being induced by wounds of the artery, however small these wounds may be. Guthrie alludes to a case where the carotid artery had been wounded by a needle and required a ligature, and to two others, in which the femoral artery, having been wounded by a tenaculum, became the seat of ulceration, and hæmorrhage ensued.

Appended to M. Lisfranc's memoir is a very extended and most valuable analytical table of upwards of 260 cases of aneurism and of wounded arteries, which shews at one view the name and age of each patient, the artery affected, the operation or other treatment followed, the occurrence of secondary hæmorrhage, or of other accidents; the date of the falling off of the ligature, the ultimate issue, and lastly, the bibliographical source, whence the original report of each case may derived.

Well may our indefatigable author assert, "that this table is an authentic clinical commentary on most of the opinions and reasonings contained in his Essay, and will be a useful pattern for young surgeons to imitate in their study of surgical science. Facts are worth every thing else. Every conclusion which is not drawn from facts must be wavering and uncertain."

Five cases of aneurism, treated on Valsalva's plan, are first on the list; then twelve cases treated with refrigerants and styptics: then forty-seven, in which compression, after various methods, had been employed; thirty, in which the old operation of opening the aneurismatic sac, &c. had been performed; 180, treated by Anel's (or, as we call it in this country, Hunter's) operation; and lastly, fourteen, in which Brasdor's operation was adopted. The comparison of the results of these different modes of treatment is very instructive. Out of the 180 cases, in which the ligature had been applied according to Anel's or Hunter's method, we observe that secondary hæmorrhage occurred in 32, which gives the proportion of about 1 in 6. The hæmorrhage usually took place from the sixth to the twenty-fourth day;—in a few cases it was much later, not till the 50th or 60th day after the operation. The number of deaths in the above catalogue of 180 cases amounts to 43; the mortality, as we might, à priori, expect, being much influenced by the size and other relative peculiarities of the vessels tied. The results of Brasdor's operation, as it is called, are well known to have been very generally unfavourable. In fourteen cases referred to, only three patients were saved; and there is doubt as to the nature of the existent disease in one of these.

For the particulars we must refer our readers to M. Lisfranc's table, which we have already praised. It deserves to be consulted by all future writers on aneurism: and indeed the memoir altogether is worthy of the established reputation of the author.

## CASES OF TIC DOULOUREUX, AND OTHER FORMS OF NEURALGIA. By *John Scott*, Surgeon to the London Hospital, &c. Octavo, pp. 52. Longman and Co. Oct. 1834.

THE whole class of neuralgiæ is a most deceitful one—and TIC DOULOUREUX is a veritable IGNIS FATUUS. It may not, indeed, as in the days of the merry monarch—

> "Lead men into pools and ditches,"

but it certainly leads medical practitioners to draw erroneous conclusions—especially when the inferences are flattering to themselves. We are always ready and willing to give new remedies a fair trial, and new doctors a patient hearing; but sad experience has repeatedly convinced us, that we are often too credulous in the one case and too indulgent in the other. Nevertheless we are still inclined to believe that we err on the right side—and that it is better to let half a dozen suspicious characters pass into the first ordeal of probation, under a lenient scrutiny, than to repulse one honest candidate, whose claims are of a doubtful character. In respect to the disease under consideration, we are willing to believe that many candid practitioners have been deceived themselves, rather than inclined to deceive their brethren. A few, or even a series of cases of neuralgia do well under a peculiar treatment, and then they fondly and naturally conclude that they have hit the mark, and made a discovery. This is the case in all obstinate and nearly incurable diseases. No one can suppose that Dr. Hutchinson was not sincere, when he set forth carbonate of iron as nearly infallible in tic douloureux. The carbonate proved useful in a very small proportion of csaes. Dr. Turnbull was still more confident with his veratria, and, if we may judge by our own experience, this remedy will not prove nearly so beneficial as Dr. Hutchinson's specific. Mr. Scott, the author of the work before us, has come forward with respectable claims to attention. He is surgeon to a large metropolitan hospital—he is the son of a medical practitioner, whose fame has resounded from pole to pole—and we have heard (for he is personally unknown to us) that he is a gentleman of probity and veracity. We are, therefore, bound to listen to his reasonings and to credit his statements, provided the former are just and the latter uncontroverted. The degree of faith which we may place in the proposed remedies, and the nature of the anticipations which we may have formed respecting the result, are matters of private consideration, and ought not to appear on the analytical record of unbiassed journalists. The preface is so unusually short, that we can give it insertion.

> "The local treatment described in the following pages has afforded such decided relief in a considerable number of cases which had resisted all other remedies, that I feel it incumbent on me to communicate a few of them to the profession, that its efficacy may be tried on a more extended scale.
>
> In doing this, I have felt anxious to contrast the description of cases which may be thus relieved with others that require very different treatment, that I may not appear to fall into the too common error of adopting the same mode of practice under dissimilar circumstances, or be understood to recommend the indiscriminate employment of any remedy in a disease so various in its causes as Tic Douloureux."—*Advertisement.*

We shall not dwell on Mr. Scott's definition and description of tic douloureux—the former being seldom possible in any disease, and the latter, in the present case, being but too well known. Mr. Scott makes a part of his definition—*the absence of any disease in the surrounding structures.* This is somewhat bold. He limits the term "tic douloureux" to an affection of one or more nerves of the face. It is not always unattended by disease of neighbouring structures—nor is it peculiar to the nerves of the face. We have seen it as exquisitely marked in various parts of the body—even in the foot, as in the face.* Mr. S. is much too positive. He says the paroxysm of pain "is as severe at its commencement as at any period of its duration." Every practitioner must have seen instances, where the acmé of pain was some time after the beginning of the attack. Mr. S. might have avoided criticism, in these instances, by using the word *generally* instead of always. The wider our range of experience is, the more cautious we become of the term "*always*," as applied to the definition or description of human infirmities.

"Notwithstanding the intensity of the pain, there is neither increased heat nor redness of the soft parts; and in the early stages of the disease, the nerve is not tender to the touch in the interval between the paroxysms, although it is exquisitely so during their continuance: when, however, the disease has been of long standing, *tenderness of the nerve is a marked and constant symptom;* and then, usually, the slightest touch or movement of the part will induce a paroxysm." 3.

Can such marked tenderness in the nerve, on the slightest movement or touch of the part, indicate less than some change in the structure? We apprehend not. Why should this tenderness be absent in the beginning, and present in the advancement of the disease? It requires no great pathological knowledge to solve this question. There is much truth, and, we believe, some error, in the following passage.

"The progress of the disease is generally marked by an increase in the severity, duration, and frequency of the attacks: so much so, as at length scarcely to allow any interval of rest to the afflicted sufferer between the periods of their recurrence. Sometimes the paroxysms will return with such certainty and severity, when the patient is warm in bed, that he anticipates with terror the hour of their accustomed access, and passes whole nights in an easy chair: in other cases, the pain is relieved when he is warm in bed, but it is intense during the day, induced by the slightest muscular action, or even by a breath of air, or the slightest touch. Thus he dreads the hour of meals, knowing that mastication will surely renew the paroxysm with great severity. Sometimes, even mental excitement will induce an attack, and often it will occur spontaneously, without any assignable cause whatever, and, generally speaking, these attacks are more severe and of longer continuance than those which result from local exciting causes. Sometimes the pain is regularly intermittent, recurring daily at the same hour, and this more frequently in the evening than in the morning; and after remaining a longer or a shorter time, it disappears entirely until the usual hour of its recurrence on the following day. In other cases, you have two or even three attacks in the twenty-four hours, coming on regularly at stated periods. *Whether the disease be thus periodical in its access or not, when it has been of some standing, the pain does not altogether disappear between the paroxysms.* The intervals are marked only by a remission of the symptoms, but attended with constant tenderness and distressing uneasiness in the part, which is, perhaps, confined to a spot of the size of a silver three-pence, and renders it liable to the production of a spasm on the application of the most trifling exciting cause." 5.

---

* Mr. Scott himself quotes a case from Chaussier, where tic douloureux of the plantar nerve alternated with the same affection of the infra-orbitar branch of the fifth pair. *See page* 8.

Now we know several cases, and, if we are not much deceived, Mr. Scott knows of one or two cases, where the TIC, even of the face, has been of long standing (if ten or a dozen of years may be considered as such,) and where there are intervals of complete immunity from the pain. Here is another instance where the author is incautious, and where "*generally*" would have been a useful word in descriptions.

Mr. Scott justly remarks, that such intense and protracted sufferings usually induce secondary or constitutional symptoms after a certain period; such as impaired strength—disordered digestion—and irritability of temper.

"Tic Douloureux has been divided into four species, designated according to the situation of the nerve that is the seat of this affection.

The first species, or that affecting the supra-orbitar branch of the fifth pair of nerves, is characterised by pain, which usually commences at the exit of the nerve from the supra-orbitar foramen, and extends chiefly over the forehead, eyebrow, and upper eyelid on the affected side, which is generally closed during the paroxysm: the pain involves the globe of the eye itself, it is attended with throbbing of the neighbouring arteries, and tension of the corresponding veins, together with a copious flow of tears.

Sometimes the pain proceeds in the opposite direction deeply into the orbit, along the trunk of the affected nerve, involving also the surface of the eye, which itself becomes somewhat bloodshot during the paroxysm, and this injection of the conjunctiva is often rendered permanent after repeated attacks; sometimes it is attended with a dull obtuse pain in the frontal sinuses, with dryness and irritation of the mucous membrane lining the nares.

The second species, or that affecting the infra-orbitar branch of the fifth pair of nerves, though often sudden in its access, sometimes comes on more gradually, being preceded by a pricking, tickling sensation at the side of the cheek, and spasmodic action of the lower eyelid; these symptoms are shortly succeeded by pain at the infra-orbitar foramen, extending over the cheek as far as the zygoma, affecting the lower eyelid, ala nasi, and upper lip, and often terminating abruptly at the mesial line of the face; sometimes it extends to the teeth, the antrum, the hard and soft palate, even to the base of the tongue, and induces violent spasmodic contractions in the muscles.

In the third species, or that affecting the inferior maxillary branch of the fifth pair of nerves, the pain originates at the orifice of the mental foramen; extends to the lips, the alveolary processes, the teeth, the soft parts beneath the chin, and to the side of the tongue, and very rarely it extends along the dental canal towards the origin of the nerve. The pain often ceases abruptly, precisely at the symphisis of the chin; but it frequently extends to the whole cheek as high as the malar bone, and even the ear. The general expression of the features, too, is much distorted during the paroxysm by spasmodic action of the muscles of the face, and this to such an extent as to throw them into a violent tetanic spasm, holding the jaw fixed and motionless during its continuance.

The fourth species has been usually described as affecting the facial nerve; *but since this has been demonstrated, by recent experiments, to be exclusively a nerve of motion, it seems scarcely possible that it can be the seat of the disease in question;* and I have generally considered that those cases which have been classed under

> this head, on accout of the situation of the pain, were, in fact, affections of some of the branches of the fifth pair of nerves." 8.

If Mr. Scott has ascertained that tic douloureux is confined to nerves of sense, and incapable of affecting nerves of motion, he has arrived at a pitch of knowledge which we are unable to contemplate. Experiments may seem to prove that the facial nerve is *exclusively* a motor nerve, and that the plantar nerve may have two roots, one for sensation and the other for motion; but we apprehend that *experience* will often modify, if not nullify, *experiment.* How often do we find parts supplied by the ganglionic nerves, and which are usually devoid of common sensation, become acutely sensible in a state of disease? Who, while in health, feels any uneasiness from food in the stomach? Who, that has dyspepsia, is free from pain during the process of digestion?

The metastasis, however, does not always relieve the primary seat of the pain. It sometimes appears to send a portion of its power to a distant spot, keeping possession of its accustomed habitat at the same time. It is equally uncertain in its duration and period of recurrence, as in its seat.

> "I have at present two gentlemen under my care, who are frequently seized with violent paroxysms of pain in various parts of the lower limbs, which manifests no constancy in its seat or duration, scarcely ever occurring twice successively in the same spot; sometimes it will remain fixed during the whole paroxysm in one situation, and at other times it will affect various parts of the limb rapidly in succession, or become instantly transferred to the opposite limb. In one of these cases the external use of veratria, in the manner recommended by Dr. Turnbull, gives relief to the spasms, but of course it does not prevent their recurrence; the other has yielded to constitutional treatment."

The above passage proves the error of Mr. Scott's definition by his own words. Some forms of this complaint, Mr. S. observes, are frequently mistaken for toothach, and many teeth are thus uselessly sacrificed. Mr. S. adverts to the two principal opinions respecting the nature of TIC DOULOUREUX—one that is caused by preternatural vascularity of the neurilema—the other, that it depends on disturbed function of the nerve itself, without any physical change in the part. Parry, Cirillo, Chaussier, Delpech, Rousset, Swan, and many others, incline to the first theory—and Mr Scott himself is of this party, and argues for the inflammatory nature of the disease.

> "Tic douloureux, as well as the other forms of neuralgia, appear almost invariably to originate in some constitutional source of irritation to the nervous system; those cases excepted, in which it arises from a nerve being irritated by diseased or decayed bone in its vicinity, or those in which it is caused by a wound of a nerve, or depends on the presence of a foreign body, as a bullet lodged in the part.
>
> It may, however, be a question, whether these local causes are capable of producing this affection in a perfectly healthy person free from any morbid condition of the nervous system. We constantly meet with cases in which the bones are the seat of simple or specific disease—the superior and inferior maxillary bones, for example, through which the nerves so liable to this affection have their course—without the disease in question being produced. Wounds and laceration of nerves, and the lodgement of foreign bodies in their vicinity, are so rarely followed by this complaint, that its occurrence must be regarded as an exception to the general rule." 15.

Van De Warker.

Mr. S. relates a case of a lady who had a constant and distressing pain in the right arm, extending from the bend of the elbow down to the fingers. It arose from the operation of bleeding, the cicatrix of which was evident; and the slightest pressure on this point gave intense pain that thrilled down to the thumb and some of the fingers, "leaving no doubt that the median nerve had been wounded." The patient was of a highly nervous temperament, bordering on mental derangement. In addition to constitutional remedies, he employed the local treatment hereafter described, and a cure was effected in the course of a month. Mr. S. arranges the constitutional causes of tic douloureux under the five following heads:—

1. "A plethoric state of system, which, however, it must be observed, very rarely gives rise to the affection.
2. An asthenic state of system, which certainly produces the disease much more frequently than the opposite condition; hence its frequent occurrence in the decline of life, when the power of the circulation begins to fail, and during periods of mental suffering and anxiety.
3. A gouty or rheumatic diathesis seems particularly liable to the disease, which often occurs in conjunction with affections of this character in other textures, or immediately on their subsidence; and it is observed that persons who are habitually exposed to cold and moisture, as fishermen, and the inhabitants of marshy districts, are particularly liable to the disease in question.
4. A disordered condition of the digestive organs, attended by the usual symptoms which characterise such derangement.
5. The impression of malaria on the system; in which case the disease assumes the intermittent character, the paroxysms recurring regularly at a given hour, and increasing or lessening in duration as the disease becomes more or less severe." 17.

In the plethoric cases, the treatment must, of course, be directly the reverse of that which is necessary in the asthenic constitution. It is in this last form that the carbonate of iron, Mr. S. thinks, has been often attended with the most favourable results. The same remark is applicable to bark, arsenic, &c. Two cases are related where the pain was periodical, and the patients weak. The carbonate of iron was successful in one case, but it required quinine and other means in the second. The veratria in this instance gave little or no relief. We have, indeed, been greatly disappointed during the last few months, in this medicine, and suspect that it will go to the "Tomb of the Capulets," ere many years have rolled away.

"Under this, the second head (asthenic) of the disease, may be classed that irritable condition of the brain and nervous system to which some persons, especially delicate females, seem to be extremely prone when their constitutional power is reduced below the natural standard,—a state extremely liable to the disease in question, and one in which hemlock seems to be productive of very considerable benefit, when exhibited in the manner long ago recommended by Dr. Fothergill." 22.

According to our author's experience, a gouty or rheumatic diathesis is far more frequently productive of TIC than any other constitutional cause—and when this is the case, "it will often yield, with surprising rapidity, to those remedies which correct this morbid condition of the system." The following case is given as a striking example.

*Case.* "In Nov. 1828, I visited a gentleman at Hampstead, labouring under one of the most severe forms of the disease I ever witnessed, affecting the first branch of the fifth pair of nerves on the right side. The pain commenced with a falling of the eyelid, and corrugation of the brow, attended with a throbbing sensation in the part; which symptoms indicated the approach of the attack. It came on gradually, commencing at sunrise; became very severe about ten o'clock in the morning; and at noon the pain would be often so excruciating, that he could neither sit, stand, nor walk, but actually writhed in agonies on the carpet, and was obliged to go to bed to hide his sufferings; from noon the pain gradually decreased in severity until the evening, when it entirely subsided; so that he slept perfectly well during the early part of the night, and was awoke in the morning by the renewal of his sufferings. The attacks were more violent in cold, particularly during an easterly wind, than in warm weather; but they always affected the same spot, occurred at the time and in the manner above described, and pursued their own course, without being relieved by any remedies, or aggravated by any exciting causes: neither mastication nor talking would produce them, nor increase their severity; but at one time they certainly appeared to be much more violent during a period of great mental anxiety. These attacks would recur daily for two or three weeks, and then spontaneously subside for two or three months, and again recur without any assignable cause; at other times they would occur regularly for a day or two, and then there would be an interval of a week or more before any fresh attack: in short, there was no regularity in the frequency of their recurrence, nor in the length of time they would continue; but he never passed a year without many attacks, for a period of twenty-eight years, with the exception of three successive years; during the whole of which he was subject to constant attacks of acute rheumatism, in almost every joint in the body in succession, and they were so severe, of such continuance, and so frequently renewed, that he scarcely left the house during that period; but he was perfectly free from Tic Douloureux the whole of this time. As soon, however, as the rheumatism disappeared, the original disease was reproduced with its usual frequency and severity. Of course, a vast variety of treatment was adopted at various times: among other remedies, he took large quantities of quinine of iron and of colchicum, but nothing appeared to have the slightest influence on the disease: blisters, leeches, opiates, &c. &c. were employed, and he was advised to have the nerve divided, but would not consent to the operation.

Finding, from the history of the case, that the disease evidently depended on a rheumatic diathesis, which I observed was kept up by an unhealthy condition of the mucous membrane of the alimentary canal, and of the hepatic secretions, evidenced by a peculiarly white tongue, and by the nature of the evacuations: instead of attempting to act specifically on the affection, I at once proceeded to correct this faulty disposition of the system, and with this view prescribed the following medicine:—

℞. Hydr. Submur. gr. ij.
Extract. Coloc. comp., Pulv. Scammon., āā. gr. v. M. et divide in pilulas ij. alternis noctibus sumendas.

℞. Extracti Sarsaparillæ, ℥ss. Aqua distillatæ, ℥vj. M. ft. mistura, cujus capiat quartam partem sextâ quâque horâ.

Under this mode of treatment the secretions rapidly improved: the tongue became gradually clean; the flatulence, which before was very distressing, disappeared; the appetite, which had been much impaired, returned; and his health and strength became manifestly recruited; and in proportion to the improvement which thus occurred in the state of his constitution, did the virulence of the disease gradually abate, and in three weeks it wholly disappeared. He was of course directed to pay particular attention to the state of his general health, and above all things to preserve the utmost regularity in the action of the bowels; and by so doing he has remained free from the slightest return of the complaint up to the present time." 25.

When the disease arises from irritation of the nerves, dependent on disordered digestion, it will repeatedly disappear on restoration of healthy action in the chylopoietic organs, provided that this be done before the disease has become established.

When the disease assumes the intermittent form, and arises from malaria,, the remedies of ague are generally efficient The following passage is highly commendable.

> " From the foregoing concise review of the nature of Tic Douloureux, and the constitutional causes in which it originates, it must be obvious that, if any one expects to remove a disease depending on such various circumstances and such opposite conditions of the system by any specific remedy, however powerful, his expectations must issue in disappointment in a vast majority of cases. It is only by a patient investigation of the peculiar circumstances attending each particular case, that we can ascertain the causes on which this or any other disease may depend; and until they are removed, all attempts at its alleviation must be utterly futile.
>
> It seems, however, that most of the remedies that have been so confidently announced as having the power of curing the disease in question, have been recommended and employed without that discrimination which is quite as essential to the successful treatment of the affection as the power of the remedies themselves." 29.

This brings us nearer the immediate object of the work—the local treatment. Our author observes that, although the disease, at its commencement, depends on constitutional causes, the removal of which will generally remove the complaint, yet, if not arrested in the early stages, the local manifestation will continue unchecked by constitutional remedies, and consequently requires particular local management. He properly guards against the inference that this local treatment should be indiscriminately employed in every case.

> " Some years ago, when I was trying the efficacy of the local influence of mercury in arresting chronic inflammation of the various structures in the body, with a view to illustrate the treatment of diseased joints on this principle, I met with several very obstinate and protracted cases of Tic Douloureux, which had resisted every remedy that could be devised, and I determined to subject them to that mode of treatment which I had found so successful in what I believed to be a similar condition of other textures.
>
> The plan I adopted was to keep constantly applied to the part, on a piece of flannel, an ointment composed of one drachm of tartarised antimony and an ounce of mercurial ointment, renewing it as frequently as it could be borne, the object being to produce such a degree of irritation on the skin as would insure the mercurial influence on the part.
>
> This method was attended with very considerable success, but I have not preserved any record of the cases in which it was employed at this time." 31.

An interesting case is here recorded, of an Essex man, 62 years of age, who consulted our author in February, 1829, for an agonizing form of tic in the face. The paroxysms were momentary, recurring suddenly every few minutes, by day and by night, the intervals being free from pain. The paroxysms were, at first, brought on by the act of deglutition—afterwards, by mastication or articulation, and this with great severity, so that he was obliged to give up speaking altogether. He had been afflicted, more or less, for 13 years. He was subject to rheumatism, and of rather a full habit. Almost every remedy had been tried and failed. After giving some aperient pills, the hydrargyro-antimonial ointment was applied to the face on a piece of flannel. It produced great irritation, but in a fortnight the paroxysms were decidedly relieved. In a month he was well. He lived till 1833, without return of the complaint.

"It subsequently occurred to me, that the iodurets of mercury, particularly the deuto-ioduret, would be a much more effectual remedy than the preceding application; producing more speedily such an abrasion of the skin, as would subject the part to the mercurial influence; and the following are cases in which this mode of treatment has been adopted,—using the deuto-ioduret, the proto-ioduret of mercury, or the common mercurial ointment, according to the state of the skin; the object being to produce such an effect upon the part as would control the disease, and to keep up the impression of the remedy to such an extent, and for such a length of time, as would remove the morbid condition of the nerve." 34.

Several cases in illustration are detailed. In the first case, a very desperate one, an ointment composed of two scruples of the deuto-ioduret of mercury, well mixed with an ounce of lard, were rubbed on the affected side of the face night and morning, until the irritation could be no longer borne. The pain was soon relieved; but afterwards returned, because the counter-irritation was too soon left off. She therefore recommenced the use of the ointment; and in a month she was quite well. "She had now lost the aged look and expression of anguish in her countenance, which had been induced by such severe and protracted sufferings, and her general health was greatly recruited."

We shall quote the following case entire, because we know the patient well, as we have attended the family for eight or ten years past. The lady herself was generally attended in her long and reiterated sufferings, by Dr. Kerrison.

"On the 23d of September, 1833, I visited a lady in Albemarle Street, who was labouring under a very severe attack of Tic Douloureux in the supra-orbitar branch of the fifth pair of nerves on the left side. I was informed that she had been subject to repeated attacks of the disease for the last eight years, after intervals of six months, a year, and eighteen months, sometimes in its present situation, sometimes in the lower jaw; that she was of a gouty family, and had been herself repeatedly subject to hepatic derangement.

The attack on account of which I was consulted had been of a month's continuance: the paroxysms were brought on by eating, by talking, by any motion of the face, and even by any mental excitement; they occurred also spontaneously, very often during the day, and invariably as soon as she lay down in bed at night.

The paroxysms came on instantaneously, without any previous warning; they lasted with the utmost intensity for ten or fifteen minutes, and then completely subsided as suddenly as they commenced, leaving neither pain nor tenderness in the part, although it was exquisitely sensitive during their continuance.

"The attacks had been gradually becoming more frequent in their recurrence, as well as increasing in their severity, notwithstanding that the most judicious treatment had been adopted for their alleviation, and for the preceding twenty-four hours they had been almost incessant, day and night. Such severe and protracted agony had necessarily induced great prostration of strength and excessive nervous irritability, and this too was aggravated by the ineffectual efforts to relieve her sufferings by the use of opiates.

I directed the opium and all other remedies to be discontinued and applied the duto-ioduret of mercury spread on lint to the part affected. This very shortly produced vesication of the cuticle, and its effect on the disease was instantaneous; for in the first twenty-four hours after its application, she experienced only three paroxysms of pain, whereas they had been previously incessant; on the following day they were rather more frequent, and continued to recur occasionally in a very slight degree during the three succeeding days, after which they ceased altogether. The ointment was renewed as frequently as the skin would bear its application, and was varied according to the effect it produced; sometimes the proto-ioduret of mercury was employed, and sometimes the common mercurial ointment, so as to keep up the influence of the remedy on the part for a fortnight, when it was entirely discontinued.

This patient continued free from any recurrence of the disease until the 19th of January, 1834; when, after an attack of erysipelas, which was evidently induced by a very disordered state of the digestive organs, she was seized with very severe paroxysms of pain in the same situation as before. I imediately directed some medicine to be taken for the purpose of acting very freely on the bowels, which was to be repeated as frequently as it could be borne; the same ointment was also applied to the part, and it produced the usual vesication; but the paroxysms continued very severe during the following day and night, after which they entirely ceased. The medicine was not taken to the extent that had been desired; the effect of the ointment rapidly subsided, and the consequence was a recurrence of the paroxysms on the succeeding Sunday, the 26th.

On the following day the patient came to town; the ointment was again applied; and as soon as its usual effect was produced upon the skin, the paroxysms were decidedly influenced, and gradually disappeared; indeed, she felt very little of them until Friday, the 2d of February, when, in consequence of the effect of the application having been allowed altogether to subside, they returned with considerable severity.

The ointment was immediately re-applied, and again checked the disease, two or three paroxysms only being experienced during the three succeeding days, after which they entirely ceased. Although the disease was thus decidedly influenced by the remedy on each time of its application, as soon as the effect was allowed to subside, it immediately recurred, and this I attribute to the irritation the nervous system was labouring under at the time, from a very disordered condition of the digestive organs, which was evidently the exciting cause of the attack in question, as well as of the erysipelas which preceded it. Indeed, there was very considerable difficulty in obviating this disordered condition; the most active medicines being necessary, throughout the progress of the case, to promote a natural state of the secretions, which, for a very considerable time, resumed their former unhealthy appearance immediately on its being discontinued." 41.

We can state, on the authority of the lady herself, that her sufferings from the remedy so far exceeded any thing she had ever suffered from the TIC, that she would rather die than undergo the trial again. Mr. Scott has only to read this passage to Mrs. W——s, and convince himself of the truth of our statement.

The following passage concludes the work.

"From the view I take of the nature of the disease, it would appear that opiates should not be had recourse to, since they cannot relieve the morbid condition of the nerve in which the disease consists, and, therefore, are injurious, by increasing the irritability of the patient. To this rule, however, an exception presents itself in those cases, in which the disease is kept up by a morbid irritability of the brain and nervous system, over which hemlock seems to exert a beneficial influence. These instances, I am satisfied, would be rendered comparatively rare by pursuing the mode of treatment I have detailed; for although the state of the nervous system is such as to re-act upon and aggravate the local disease, this state is invariably kept up by the protracted sufferings of the patient, and will be more speedily and effectually relieved, and the patient restored to health and tranquillity, by removing the local source of irritation, than by the use of any narcotics, however powerful.

In those cases, then, in which the disease depends on local causes, it will yield to local treatment, and the subsidence of such constant pain will be speedily followed by a surprising renovation of the health; but where it is kept up by constitutional influence, instead of endeavouring to give relief by opiates, it is much more advantageous to alter the condition of the nerve in the manner I have mentioned, which will speedily alleviate the pain, at the same time that your attention is directed to the removal of the constitutional derangement, which otherwise would certainly induce a recurrence of the affection as soon as the local treatment ceased to be employed.

Of the efficacy of mercury in the local treatment of disease, I have elsewhere spoken at considerable length; therefore it is unnecessary again to enlarge upon the subject; and my experience enables me to speak with confidence of the combined effects of local and constitutional remedies in the treatment of neuralgic affections, which will often yield with great rapidity to their judicious employment. While, however, I am satisfied that the disease itself, as well as the acquired predisposition to its recurrence, may thus be so completely removed as to leave no danger of its spontaneous return, I would by no means be understood to assert, that any mode of treatment can alter the natural predisposition of the nervous system, and insure the patient from a reproduction of the complaint when exposed to the influence of exciting causes. If, therefore, a particular attention to the causes of the malady, in each individual case, is essential to the selecting of the most judicious mode of treatment for its relief, it is equally so in a prophylactic point of view; since it is only by a constant attention to this part of the subject that the recurrence of the disease is to be prevented." 52.

We have but few remarks to make. The work is written in a candid manner, and is perfectly free from mystery or exaggeration. Our experience of the disease, however, and our knowledge of one of the most remarkable cases introduced in the work, diminish very strongly any sanguine hopes from the *local* treatment forming the principal feature of the Essay. That such powerful and painful counter-irritation, as that employed by Mr. Scott, will occasionally supersede, for a time, the neuralgic suffering, we have no doubt; but beyond this, we have little faith in topical applications.

## On the Anatomy and Diseases of the Neck of the Bladder and of the Urethra: being the Substance of the Lectures delivered in the Theatre of the Royal College of Surgeons in the Year 1830; and in the Westminster Hospital in 1833 and 1834. By *G. J. Guthrie*, F.R.S. Surgeon to the Westminster Hospital, and to the Royal Westminster Ophthalmic Hospital, &c. &c. &c. Octavo, pp. 284. London, 1834.

The diseases of the urinary organs have been investigated with much ardour and with some success by surgeons and physicians of the present day. Chemistry has done something and pathology has done more, to discriminate the affections of particular portions of the urinary apparatus, and to found on an accurate diagnosis a rational system of treatment.

If we look through the pages of the older writers, surgical and medical, we perceive the diseases of the kidney, the bladder, and urethra lumped together—symptoms erected into substantive complaints—and substantive complaints degraded into symptoms. Irritable bladder and catarrhus vesicæ are terms indiscriminately and generally employed, vague in their meaning, erroneous in their application, and pernicious in their influence.

Morbid anatomy has irrevocably banished those general assumptions and those idle notions, which were formed and fostered on a superficial examination of symptoms. Yet morbid anatomy has effected no more in this than in other departments of medicine. Physic and surgery have alike felt its power, and alike submitted to its revolutionary hand. There are some who look back with fondness and regret on the days of the Hippocratists and the barber-surgeons, who sigh at the downfall of that wholesome influence which dictated from the dogmatic chair of physic the handicraft of obedient surgery, and fettered infant science with the cobwebs of scholastic jargon and Aristotelian subtelties. The pedant writer may still exist, who would smother the lusty facts of Nature in the swaddling and the blankets of laborious art—a scriblerus who has lived upon the dusty shelf, and fed, moth-like, on the musty page—a critic who sneers folios and thinks black-letter—a biblical monstrosity, inopportunely dragged from the library and the museum to mingle with the beings of the open day.

Who would not laugh if such a man there be?

The works of Dr. Prout and of Sir Benjamin Brodie, so recent in their appearance and so valuable in their materials, would seem to render the chances of success on the part of other writers problematical, at least for the present. Yet so earnest is the competition in every branch of science and of art, that the triumph of one man induces others to attempt to share the laurels and divide the spoils. The knocks at the door of the temple of Fame are the more incessant the less the clamorous applicant is answered.

Mr. Guthrie informs his readers in an advertisement, that many years have elapsed since a deputation from the medical officers of the army requested he would publish the lectures he had delivered to them on the diseases of the urinary and sexual organs. The lapse of those years has given time for observation, and has been productive of experience. He therefore offers this, the first part of his work, more worthy than it then was of the attention of the public, and the approbation of his friends.

The work consists of sixteen lectures. They are partly composed of anatomical description, chiefly of surgical remark. The descriptive portion is confined to the urethra and the neck of the bladder; the surgical consists of observations upon stricture and the consequences that result from it, and on various diseases of the prostate gland. The large amount of descriptive anatomy will preclude our offering an analysis of these lectures. We shall endeavour to present a consistent account of their more important or more novel contents. The talents and the opportunities of Mr. Guthrie ensure an attentive consideration of his opinions.

The first lecture is almost exclusively devoted to the structure of the bladder. Mr. Guthrie's investigations appear to have been minute, and are probably correct. Much of what he states is to be found in the best anatomical works, especially in those of the modern French school: but some of the descriptions, the conclusions, and the speculations, would seem to be his own.

Mr. Guthrie presents a particular account of what the French have denominated the *trigone*, a triangular space included between the *luette*, or the verumontanum, in front, and a line which may be drawn from one orifice of the ureters to the other behind. This triangular part is composed of a peculiar elastic substance, which surrounds the orifices of the ureters. We mention these circumstances for the purpose of introducing Mr. Guthrie's opinions on the mode in which the urine is received into the bladder. He observes that the orifice of the ureter is less distensible than the remainder of that canal; and that it still remains of its usual size when the latter has become much enlarged by the continued pressure of urine retained in it. The passage of calculi into the bladder is frequently obstructed at the orifice of the ureter.

> "If the stone is large it sometimes sticks in the orifice and cannot pass through, giving rise to continued inconvenience, and to the symptoms of stone in the bladder from sympathy. This is exemplified by a preparation in the museum of the Royal College of Surgeons. The patient, a gentleman, consulted several surgeons of eminence, was sounded, the stone was detected, the operation was declared to be necessary, but was deferred for two or three weeks, until he should improve a little in health. This however he did not do, but on the contrary gradually got worse and died. On examination the stone was found sticking in the orifice of the left ureter, as I have described it. If an operation had been done, the stone would probably not have been extracted, its situation might not even have been detected; and it shows the propriety and necessity of not only being able to feel a stone *distinctly*, but also to be able to move it *distinctly* with the sound before an operation is resorted to." 6.

Mr. Guthrie alludes to those linear bands which descend from the ureter on either side and pass into the prostate, or are attached behind the uvula These, as our readers are probably aware, have been considered muscles by Sir Charles Bell, who thought that they were intended to protect the orifices from pressure and obliteration, and maintain them in a patulous condition. Mr. Guthrie seems to think that they are better fitted for keeping the trigone fixed and for strengthening and raising it up when necessary, than for acting on the ureters, which, being surrounded by an elastic substance, require no peculiar apparatus to preserve them open. Both speculations may safely be left to the judgment or the fancy of those who wish to solve the knotty problem.

The trigone is well known to be extremely sensitive, and the pain or irritation sometimes experienced on the entrance of an instrument within the bladder has been thought to be owing to its contact with this part. But Mr. Guthrie offers some reasons for doubting, indeed for denying the justice of this opinion. The trigone is seated at the posterior and inferior portion of the bladder, and the point of an instrument, when the organ is moderately full, would only touch the very apex of the part in question. It is probable that the irritation is excited by the instrument touching the prostatic division of the urethra.

The trigone enjoys an important surgical relation. It is here that the trocar is introduced into the bladder, in the operation of puncturing the latter through the rectum. To this operation Mr. Guthrie urges the following objection.

> "The operation of puncturing the bladder through the rectum was founded on the supposed anatomical fact, that the triangular space rested on, and closely adhered to the rectum, so that the urine would flow direct from one into the other, without escaping into the neighbouring structures; but it has been shown that the peritoneum instead of passing down behind the bladder, and between it and the rectum to the base of the triangular space, and there terminating in a cul de sac, does sometimes pass on further, between the triangular space and the rectum, and even occasionally up to the prostate gland: so that by puncturing through the rectum the general cavity of the peritoneum is opened before the bladder is penetrated, and the patient in such case must be lost, from the urine finding its way into the peritoneal cavity, and giving rise to an inflammation which has always been destructive whenever this kind of effusion has taken place, and from whatever cause. I am not aware of there being any signs by which this conformation can or cannot be distinguished, and consequently, if that opinion be correct, the safety of the patient depends not on the knowledge and ability of the surgeon, but on an accidental although the more usual formation of the part on which the operation is performed." 11.

This objection is highly deserving of attention, yet we are not aware that many accidents of the nature alluded to by Mr. Guthrie have followed the performance of the operation through the rectum.

Mr. Guthrie proceeds to describe with minuteness, and, we suppose, with accuracy, the longitudinal muscular fibres of the bladder. Yet, perhaps, the description contains little of general interest, and is chiefly adapted for the attention or the criticism of those engaged in anatomical pursuits. The question of the existence of a sphincter, is more definite and more important. Sir Charles Bell conceived that he could demonstrate it, but Mr. Guthrie has failed to discover it. He is of opinion that the portion of the bladder surrounding the opening into the urethra possesses but little muscular contractility, whilst it is endowed with a considerable degree of elasticity which any one may ascertain by stretching the part. When the two muscular layers of the bladder contract, its tendons inserted into the pubes, become with the prostate generally the fixed points, the urine is forced against the orifice of the urethra, which yields by its elasticity, and returns to its former state when the pressure is removed. But circumstances appear to shake Mr. Guthrie's firmness, and he grants that it is possible that the neck of the bladder may be muscular *and* elastic.

Mr. Guthrie understands by "neck of the bladder," the small part surrounding the very opening itself into the urethra—a ring a little broader or thicker than the bladder itself—that portion on which the uvula is situated, the urethra being before and the bladder behind it. It is necessary to state, and to remember this, for, in common anatomical parlance, the neck of the bladder signifies that portion included in the prostate.

With a notice of one other point, we conclude the first lecture of the work. The point in question is this.—that in cases in which the urine is suppressed, apoplexy, or rather coma, is the consequence. Mr. Guthrie remarks, that all persons in whom the suppression is complete, die paralytic and apoplectic. He presents an illustration of the fact, in the instance of a lady affected with cancer of the uterus. The disease, after a time, extended towards the ureters, which at last were embraced and pressed upon by it as they entered the bladder. The lady, as this took place, began to suffer more than commonly from derangement in her urinary apparatus; the bladder was found ultimately, on passing the catheter, to contain little or no water: she fell into a state of low fever, became paralytic, afterwards comatose, and died paralytic and apolectic. On examination, the ureters were found impervious at the part where they were grasped by the diseased structure; above this they were greatly enlarged, the kidneys were also dilated.

It appears to us, that Mr. Guthrie's expression might advantageously be rendered more precise. Patients in whom the urine is suppressed, retained, or extravasated into textures not intended for its reception, evince a remarkable, if not a constant, disposition to coma and to serous effusion in the brain. It has long been known that suppression of the secretion gives rise to symptoms of this description; but it is not, we believe, so generally understood, that other affections of the urinary apparatus not unfrequently occasion the same effect. Retention of urine may be readily supposed to produce sequelæ very similar to those resulting from suppression, for retention must itself give rise to suppression. But it might not, à priori, appear so probable that chronic inflammation and abscess of the kidney—or urinary extravasation into the cellular tissue—or that chronic abscess in the pelvic fascia, following lithotomy, or connected with stricture would severally be attended, in their latter stages, with symptoms of cerebral effusion. Yet such is the fact, and, leaving the explanation for the present to others, we content ourselves with barely stating it here.

The second lecture is devoted to the anatomy of the prostate, to a glance at the diseases of the elastic structure of the neck of the bladder, and to the symptoms of the pouches occasionally formed in the parieties of the latter.

The anatomy of the prostate may be left to the anatomists. Mr. Guthrie dispproves, what has been already universally disallowed, the claim of Sir E Home to be deemed the discoverer of the third lobe of the gland in question. Mr. Guthrie mentions some curious circumstances connected with the preparations of the prostate, now in the Hunterian Museum of the College. But we pass to some practical deductions drawn by Mr. Guthrie, from the anatomical data which he offers. These deductions are as follow.

1. That the elastic structure at the neck of the bladder may be diseased without any necessary connexion with the prostate gland.

2. That the prostate may be diseased without any necessary connexion with the elastic structure.

In proof of the preceding statements, Mr. Guthrie exhibits to his pupils the preparation, and to the profession a drawing, of disease of the elastic structure of the bladder, independent of any affection of the prostate. He also alludes to another case, in which the circumstances were just reversed, the prostate being enlarged and the elastic structure unaffected. The right lobe of the gland was the part most augmented in dimensions, nearly closing the vesical orifice into the urethra, pushing the latter to the left, and drawing up the mucous membrane of the bladder, so as to form a bar across its under part. Had the bulk of the prostate been reduced, or the bar of mucous membrane been removed, the obstruction to the flow of urine would, in either case, have been diminished.

When a third lobe of the prostate projects into the bladder, the elastic structure is usually implicated, and constitutes a hard, firm bank, in addition to the nipple-like valve of the former. Between these, the retention of urine may become complete, and the complication is much less curable than disease of the neck of the bladder alone.

> "In its simple or first stage, when there is only a defect of elasticity, it gives rise to stricture at the very neck or orifice of the bladder, curable by common means, if properly applied. In its second stage, when the bar is formed and becomes more or less rigid, a small bougie rests against it, and if made of soft materials bends, and cannot be made to proceed; if a solid instrument, it passes in one of the hollows on each side of the white central line, which are also deepened by the elevation of the uvula vesicæ, catches on the valve at the entrance, and when the handle of the instrument is depressed, it raises it, bladder, rectum and all, upon its point, until the pain or the resistance induces the surgeon to forego the depression, or the valve yields or is torn, when it finds its way into the bladder; or perhaps the surgeon, not possessing much experience, is satisfied with the distance the instrument has gone in, and supposes he has passed it into the bladder. This is one of the evils which arises from the attention which has been paid to the length of the urethra with regard to inches only; for when a man is told that the urethra is often only eight inches long, and finds his instrument has passed perhaps more than nine, he may deceive himself, although his patient is not relieved. I had a gentleman from America under my care lately under these circumstances. He had never passed his bougie beyond the neck of the bladder, although he and his surgeon supposed they had done so. When I succeeded in doing it, he became sensible of the difference; and I desired him, on his taking leave, always to use in future a No. 12 catheter, with a very round point, that the passage of urine through it might convince him of the fact." 27.

In the third stage of the disease, when much difficulty of voiding the urine is experienced, many serious symptoms are the consequence. To two of these Mr. Guthrie draws attention.

The first results from the occurrence of pouches in the vesical parietes. Such a pouch having formed, will probably increase, and, having thus increased, may perhaps become the seat of a calculus. Whether the latter be contained in it or not, urine is collected, and in some measure confined. The symptoms of this occurrence, though various and ambiguous, are deserving of attention. In a case that occurred to Mr. Guthrie, after emptying, as he supposed, the bladder by the catheter, he found that he could get a further quantity of urine by passing the instrument in a certain direction; probably it entered a vesical pouch. If the bladder be emptied by the catheter in the erect position, and the patient be made to change it by lying down, retaining the catheter in its place, an additional quantity may run from the instrument, showing that one or other of these pouches has been emptied.

"A gentleman consulted me on account of a difficulty he had in passing his water, for which he used an elastic catheter twice a day and sometimes thrice, with great relief. But the symptoms he complained of most, and for which he applied to me, was, that after emptying his bladder in the erect position on going to bed, he soon after felt as much desire as before to make water, and that on straining forcibly he could pass a little. I desired him to use the catheter, a second time when he felt this uneasiness, which he did, and obtained about three ounces more water. This led to the belief that he had pouches in his bladder, which were only emptied by change of position. I wished him to ascertain what position emptied them, but he could not do this in a satisfactory manner, for a reason which appeared after death, namely, that there were several pouches, which could not all be emptied by the same position. He obtained considerable relief by first drawing off his water in the erect position, and then by lying down with the catheter in the bladder, and by changing his position from either side to his face (for these pouches rarely form on the fore part) he removed a further quantity, after which he obtained rest, until the pouches and the bladder were refilled, and the desire to discharge his water again became considerable. If this investigation be made in the morning on rising, it does not give so accurate a degree of information, and must not be mistaken for a similar symptom, about which you may be consulted by persons who have no particular disease. It often happens, that at about fifty years of age the urine passes with less force and more slowly than formerly, although there may not be any perceptible or discoverable disease of the neck of the bladder. It has perhaps only lost a slight portion of its elasticity. If the person be very attentive to himself, he finds that he makes his water very well on rising in the morning; and that during the time of dressing, he makes it once or twice in larger quantity. This may happen to any one at any age, and arises from the circumstance of the urine not being secreted usually to any extent during sound sleep, whilst the kidneys become after such state of rest, much more active on the person's moving about. It is not a sign of disease. The urine is also devoid of any offensive smell, which is rarely the case when it has been retained in pouches. In one gentleman, the existence of one or more pouches of this kind became evident on injecting the bladder; twelve ounces of warm water could be thrown into it before much uneasiness was produced; but on drawing it off, ten ounces only could be obtained, and rarely the whole twelve even by any change of position." 30.

These facts and observations are highly deserving of attention. It is the recollection and the application of many, and sometimes of trivial circumstances, that constituted superiority of judgment and of tact in the diagnosis of disease.

The second symptom to which Mr. Guthrie draws particular attention, is what he denominates the "fluttering blow of the bladder." This blow, inflicted on the catheter or sound, has sometimes been mistaken for the impulse produced by the contact of an instrument with a calculus. Mr. Guthrie appears to have met with four cases in which the circumstance occurred, and from those cases he deduces a description, and attempts an explanation of it.

The first case was that of a soldier in the York Hospital, invalided for some complaint of his urinary organs. He suffered from stricture, but when this had been removed, the symptoms were not materially mitigated. On examination with the catheter, a smart blow was felt on the instrument with the termination of the flow of urine, giving rise to the idea of a stone. This always took place, and sometimes the stroke seemed to be repeated twice, or even three times, although each time fainter than before. The first blow would sometimes force the catheter from between the finger and thumb, when slightly held, and at least two inches out of the urethra. The case was supposed by some to be stone, but the difficulty was never dispelled by an inspection of the parts after death, for the patient was discharged.

In the second and third cases the sensations were the same, save that the little taps on the catheter resembled more the blows given by the wings of a bird in fluttering.

The last case afforded a solution of the symptom. The blow was perfect, but unattended with the grating which a calculus occasions. Mr. Guthrie examined the bladder several times very carefully, and allowed the urine to flow between the blades of the small calculus-forceps, which were kept apart to receive any thing which might fall between them. The silver catheter often received so smart a shock, that it was forced out a couple of inches, and from between the fingers when held loosely, so that the patient himself could not help observing it, and asking the cause. The patient died. There was not a stone of any kind, and nothing peculiar, save five pouches, and "the bar" at the neck of the bladder, formed by its elastic, but now rigid substance, totally unconnected with the third or middle lobe of the prostate. The "fluttering strokes" of the bladder on the catheter were caused, Mr. Guthrie entertains no doubt, by the descent of the pouches containing urine, which, being more or less solid substances, fell, or were forced against the instrument, by the muscular efforts of the bladder in contracting, to effect the expulsion of the last drops of urine.

"When symptoms have given rise to the suspicion of the existence of a stone, and the fluttering strokes or blows on the instrument have been felt, I suspect it may have happened that the operation has been performed and no stone has been found. At all events, a surgeon may be forgiven for the mistake more readily in this case than in most others, and I therefore dwell upon it longer than it perhaps requires, in order to prevent such a misfortune from occurring in future. I cannot help thinking it has been the most common cause of such an accident, and when I hear and have heard, that although no stone was found, the patient when he survived, was much the better for the operation, I am more satisfied that I am likely to be correct in my supposition. The good done by the operation was caused by the division of the bar at the neck of the bladder, and the consequent removal of the obstruction to the passage of the urine out of it; and I approve of a proper operation being done for this purpose in certain and peculiar cases to be hereafter noticed, but then the patient is not consenting to an operation, supposing it to be for the removal of a stone, and the surgeon is not relieving him by a mistake." 33.

The attention of surgeons has been greatly directed, of late years, to the causes of death after the performance of lithotomy. The old and the prevailing notion, that patients usually die of peritonitis, has been shaken, if not absolutely overthrown, by pathological investigations, more particularly by those of Sir Benjamin Brodie. Those researches have proved, that diffuse inflammation of the cellular tissue of the pelvis and abdomen, is more frequent and more fatal than genuine peritonitis. The former indeed, very seldom attains a considerable height, without giving rise to more or less of the latter; but cellular inflammation is the primary complaint, and prevention of *it* is prevention of all.

The mode, then, of obviating the occurrence of diffuse cellular inflammation has naturally been a subject of anxious consideration. There appear to be two parties in the surgical world, entertaining two different, indeed opposite sentiments. The one maintains that dilatation of the capsule of the prostate gland is preferable to its division. Sir Benjamin Brodie may probably be deemed the most able supporter of this opinion, which ranks among its advocates the illustrious Scarpa. The other party affirms that division of the prostatic capsule, and of a portion of the neck of the bladder, if necessary, is attended with less risk than forcible dilatation. Mr. Fletcher, of Gloucester, may be looked on as the recent Coryphæus of this sect. Mr Guthrie would appear to agree with those, who consider inflammation of the cellular tissue as the usual source of danger and of death; but he does not agree with those who suppose that division of the prostate occasions the inflammation. In speaking of the veins which bound the prostate, he remarks as follows:—

> "My principal observations on these points will be directed to show, that the infiltration of urine, and which I am disposed to say is the principal cause of death, does not prove fatal from its having been caused by a complete division of the prostate, or of a portion of the bladder beyond it, but from its being penned or dammed up, after it has been allowed to escape, by the levator ani muscle, and the deep fasciæ of the perinæum. It is the want of a proper division of these parts that is the real cause of death, and which takes place, therefore, from a defective manner of performing the operation." 35.

Thus we see another theory of the operation proposed, and another suggestion added to the many which now exist, embarrassing, perhaps, rather than aiding the lithotomist.

For our own parts, we cannot avoid the suspicion that, in spite of all precautions and of all improvements, diffuse inflammation of the cellular tissue must continue to be a frequent consequence of lithotomy. That tissue is remarkably prone to inflammation in all parts of the body. Slight injuries occasion it as well as severe ones, and a trivial wound in the arm or in the leg is frequently followed by cellular inflammation, altogether disproportionate to the violence inflicted. This peculiar tendency to inflammatory action is essentially due to the nature of the tissue—to its great diffusion, its various situations, and the free communication of its several parts and of its individual cells. If a wound in an extremity penetrate the fascia, and affect the cellular tissue below it, the latter is particularly apt to inflame. Effusion of serum, of lymph, and of pus, takes place below the fascia and throughout the limb, and sloughing of the subfascial tissue in the first instance, followed by death of the fascia and integuments, is the natural and inevitable consequence, if incisions fail to arrest the mischief.

The anatomical disposition of the cellular texture of the pelvis and the perineum, is remarkably favourable to the development and diffusion of inflammation of its substance. The fascia of the perineum binds it down externally, and confines the effusion of serum and of pus, which it also directs to the scrotum and abdomen. The pelvic fascia might contribute to protect the cellular tissue of the pelvis which it incloses, but unfortunately that fascia is necessarily divided in the operation of lithotomy. The wound of the gorget or the knife, and the bruising occasioned by the forceps and the stone, must, especially when aided by the contact of the urine, give rise to some inflammatory action in the cellular tissue of the pelvis and the perineum. The inflammation thus necessarily excited must, in some instances at all events, diffuse itself throughout the cellular tissue within the pelvis, and through that also which passes upwards to the spine and loins, behind the peritoneum. We are more disposed to wonder at the rarity than the frequency of the occurrence.

We would not be understood to discourage attempts to diminish the fatality of lithotomy, by variations in the nature, the direction, or the extent of the incisions. Yet we cannot avoid expressing our fear that little remains to be accomplished in these matters. We are afraid that the mortality consequent on the removal of stones of any size from the bladder by lithotomy, will never be much less than it is at present, and we ground this belief on our knowledge of the general and marked disposition of the cellular tissue to inflame. We believe that the improvements yet in store, and such, we cannot doubt, there are, must be looked for in the increased facilities of recognizing the existence and effecting the removal of small calculi from the bladder, and, probably, in the better application of lithotrity.

The conclusion of the second lecture in the work before us is devoted to the description of the—female prostate. The vulgar suppose that the fair sex are usually deficient in this gland, but our author assures us that the ladies are belied, and that they really enjoy the organ in question.

> "If the word prostate," says the champion of the rights of the fair, "be used with reference to its derivation, as standing before the vesiculæ seminales, certainly a woman has not a prostate, because she has no vesiculæ seminales, but if it be used as a substantive word, to express a particular thing, in the same manner as the words arteria innominata are now used, as a name for a particular artery, which formerly had no name, then a female has a prostate, for there is a substance of the same shape, form, and nearly of a similar structure surrounding the commencement of her urethra. It is the size of the prostate in a boy before the age of puberty, and resembles very nearly in external appearance the same part in the male." 35.

The prostate gland of the female has no ducts. Mr. Guthrie, indeed, is unwilling to honour her with the possession of a gland, but contents himself with simply awarding her a prostate, or rather a "corpus globosum." With becoming diffidence he assigns the property conditionally only "until further orders from the critics."

If we hesitate to pronounce an opinion upon these anatomical points, it is because we are aware that Mr. Guthrie has conducted his anatomical researches with minuteness and with care. Without equal attention and examination it would be idle in a reviewer to confirm or to condemn.

The third lecture is occupied with the description and the diagrams of muscles which Mr. Guthrie has discovered around the membranous part of the urethra. Without those diagrams a description would be incomplete, and we can only present the following notice of the muscles alluded to, a notice contained in an account which Mr. Guthrie gives of two preparations.

One shews the membranous portion of the urethra surrounded by a well-defined muscle.

> "On the upper part there is a central median line of tendon, which runs backwards to be inserted into the fascia covering the upper surface of the prostate, and again forwards on the urethra through the triangular ligament to be inserted in front of it near the union of the corpora cavernosa. On the under part a similar tendinous line is to be observed, which is attached backwards to the fascia underneath the apex of the prostate, and forwards to the central tendinous point in the perinæum. The muscle on its upper surface is covered by fascia descending from the pubes which adheres to it, and this I take to be what Mr. Wilson described as the tendinous origin of his muscle, and from which he supposed the fibres descended to surround the urethra, which they really do not. From the median tendinous line in the upper part of the urethra the fibres pass outwards on each side, converging towards the centre, where they form a leg, as I term it, of muscular fibres. On the under surface the same thing takes place, and a leg on each side being thus formed from the superior and inferior fibres running from each half of the urethra, they pass outwardly, that is transversely across the perinæum, to be inserted into the ascending ramus of the ischium a little below its junction with the descending ramus of the pubis on each side. These attachments are cut off in this preparation, but when I pull on each of these legs you see that they surround the urethra like a sling." 41.

For a more complete delineation of the muscle we refer the reader to the work itself. We therefore proceed to the fourth lecture, in which the anatomy of the membranous part of the urethra, and the mode of introducing instruments into the bladder are carefully discussed.

The length of the urethra has often been an object of particular, if not always of profitable attention to anatomists and surgeons. Mr. Guthrie ridicules the attempt to attach much importance to such measurement, the urethra of one person differing greatly in point of extent from that of another individual. In proof of this point, Mr. G. displayed on the lecturing table two urethræ, one of which was eleven inches in length, while the other was but eight. The difference depended principally, of course, on the pendulous portion, or that contained within the penis. Yet the other portions exhibit varieties in various individuals.

> "I place no reliance whatever on the measurement of the urethra made after death, for, although the urethra may be then eleven inches long, as in the preparation before you, I never met with a case, unless there was a diseased prostate, in which a catheter ten inches long was required to draw water: on the contrary, one eight inches long will generally be found sufficient, and I have known one of seven answer well; the additional inches being usually gained by the elongation or stretching of the parts during life or after death; and if a surgeon calculates inches as his instrument proceeds, instead of considering the points of attachment as so many land-marks to guide his progress, he will be frequently in error, and always liable to do mischief. I believe the mistake of most consequence takes place in regard to those two parts which are called *membranous* and *prostatic*. In the preparation before you, in which the urethra is eleven inches long, the length of these two portions is near three inches. From the orifice of the bladder to the triangular ligament, the usual length of the prostatic portion is estimated at about fifteen lines, the membranous at about twelve, or something more than an inch for the prostatic portion, and perhaps a little less than an inch for the membranous. In this very urethra, eleven inches long, I have no doubt but a catheter nine inches in length would easily have drawn off the urine during life. I am satisfied that one of

eight inches would have done it, and the membranous and prostatic portions, which now appear to be near three inches in length, would have been cleared by an instrument very little more than two; and this would occur from the manner in which these parts are supported and maintained against the pubes by the fasciæ, which attach and connect them and the surrounding parts to each other. When the prostate is diseased, on the contrary, the urethra at this part is made to undergo a considerable degree of elongation, and a catheter under such circumstances, should be longer and larger in the curve." 54.

Perhaps it may be new to many of our readers, that the glands of Cowper are present in the female, and open, of course, into the vagina. The older anatomists were acquainted with the fact, but probably most of the moderns have forgotten it.

Mr. Guthrie proceeds with the anatomy of the urethra. The student may peruse his pages with advantage; we can only cull a passage here and there.

The orifice of the urethra is in most individuals the narrowest part of the canal. Not only is it narrower than the other portion, but a dense and peculiar structure surrounds it, which renders it little capable of dilatation. If that structure be destroyed by ulceration, the aperture displays in general a great tendency to contraction, and a stricture of the very orifice is formed. We have seen, however, several instances of syphilitic sore of the orifice, which have destroyed the ring at the orifice of the urethra, and have yet induced no tendency to contraction during cicatrization. We lately saw a gentleman in whom a circular venereal sore had scooped out about a sixth of an inch of the substance surrounding the orifice. The ulcer had healed, but a patulous aperture of good dimensions remained. Generally, the fact is as Mr. Guthrie has stated it, and the disposition to contraction is productive of annoying or even of distressing consequences. It is not uncommon for patients to apply at the Lock Hospital, with the orifice completely obliterated by cicatrization, and the urine voided by one or by several small tortuous channels opening on the inferior surface of the glans, or even farther back upon the penis.

The orifice of the urethra is sometimes very small as a congenital formation. Sometimes this is unaccompanied with any other apparent aberration from the natural condition; frequently a kind of valve, consisting of membrane, and extended across the lower portion of the aperture, is the cause of its diminished volume. In either case division is often indispensable. This Mr. Guthrie does with a small, sharp, and strong iris knife, carried directly downwards. The wound is apt to heal if care is not taken to keep the edges apart by introducing a bougie from time to time to separate them.

Mr. Guthrie's directions for passing an instrument into the bladder are circumstantial and judicious. But their character is too elementary to render a further notice of them necessary. We may content ourselves with stating that Mr. Guthrie impresses on the mind of the student the rule of keeping the point of the instrument sliding against the upper surface of the urethra; and in cases of enlargement of the prostate gland, he insists on the employment of a long large catheter, with a considerable curve. He glances at the occasional perforation of the prostate by the catheter, a perforation generally accidental, seldom injurious, and sometimes serviceable.

It is better that the prostate should be perforated by an instrument than that puncture of the bladder should be had recourse to; but, of course, it is still better that where neither is required neither should be done.

The fifth lecture is exclusively dedicated to observations on catheters and sounds, and to comparisons of their respective merits and value. This lecture, though useful to students, we may disregard, and proceed to the consideration of the sixth, in which a moot and knotty point, the structure of the walls of the urethra is taken up by Mr. Guthrie. The opening of the lecture resembles the apostrophe of Pilate. "What is truth?" said the Roman governor:—"what is the urethra?" says the English doctor. Both questions are more easily asked than answered. The metaphysical analysis of truth might seem more calculated to occasion doubts than the physical examination of a human organ. Yet the Sorbonne might probably fail to produce more eager disputes or more angry disputants in one instance, than the schools of anatomy have done in the other.

Mr. Guthrie endeavours, like some able umpires, to compose the quarrel, by pronouncing all the parties in error. He neither agrees, in the case of the urethra, with those who affect to find it muscular, nor with those who are content with deeming it elastic. But he passes in review its various parts, anatomises their structure, and investigates their functions. He observes that all parties appear to him to consider the wall of the canal to be similarly composed in its whole length; and he apprehends this to be a source of error, there being three principal divisions very differently circumstanced with respect to the surrounding parts. Those divisions are the prostatic, the membranous, and the bulbous and spongy parts of the canal.

Mr. Guthrie goes on to state that it is acknowledged by almost all surgeons of experience that the prostatic and membranous parts are not usually the seat of stricture, which is confined to the bulbous and spongy parts, opposite and anterior to the ligament of Camper. We conceive that Mr. Guthrie labours under a misapprehension on this point. In one of the latest works upon the subject, the lectures of Sir Benjamin Brodie on diseases of the urinary organs, that able surgeon states that—"The ordinary situation of a permanent stricture is at the anterior extremity of the membranous part of the urethra, just behind the bulb of the corpus spongiosum."* Mr. Guthrie, however, is opposed to Sir B. Brodie on this question of fact, and affirms that the bulbous and spongy parts of the urethra are the ordinary seat of permanent stricture. It is necessary to state this circumstance explicitly, because it is the peg on which Mr. Guthrie's argument is hung.

That argument may be reduced to the following positions:—that as the membranous part of the urethra, surrounded and compressed by muscular fibres, is not the ordinary seat of stricture, it is probable that the existence and the action of muscles are not materially operative in its production. It is true that at the bulb the accelerator urinæ is found, but it is true likewise that stricture may exist in the anterior part of the canal, where no satisfactory muscular apparatus can be seen. Mr. Guthrie finds in the corpus spongiosum a more efficient agent both in production and perpetuation of stricture.

---

* Vidus Opus, Cit. p. 6.—*Eds.*

> "The whole anterior portion of the urethra, or that part in which stricture is usually situated, is surrounded by the corpus spongiosum; and it is to it that I am disposed to attribute the principal share in the formation of the worst kinds of permanent stricture, and the great difficulty which is experienced in effecting a perfect or radical cure." 76.

It is evident that the truth of this theory of stricture, if theory may be deemed an appropriate term, must stand or fall by the accuracy of the fact on which it is erected. The fact is the greater prevalence of stricture in the spongy than in the membranous part of the canal.

Mr. Guthrie dwells on the elasticity of the corpus spongiosum in its healthy state—on its inelastic hardness where the seat of stricture. When the spongy body is erect, the hardened portion continues undilated, whilst the rest is distended before it and behind it. If the hard part be cut into, the corpus spongiosum seems to have lost its spongy appearance, its erectile texture has become consolidated, and resembles rather a solid gristly substance than an elastic structure. This kind of disease is very apt to form when the urethra is ruptured, during the severity of what is termed a chordee. The preceding account of stricture in the corpus spongiosum is equally consistent with reason and with fact. The statement which succeeds we do not so clearly comprehend.

> "When the mucous membrane is inflamed, and has lost part of its elasticity, it does not always yield as readily under distention as some of the interstitial parts of the corpus spongiosum; which when they give way, allow the blood to be effused in the strict sense of the word; and a soft swelling takes place, which is a sufficiently remarkable although not a very common accident. I have just now under my care a young gentleman, who has a soft swelling of this kind about two inches and a half from the orifice of the urethra, and which appeared suddenly. The urethra was inflamed at the time, but was not ruptured; a full-sized bougie could and can be readily passed along it. It gradually altered its appearance, became less, and would I think have gone away altogether, had not another gonorrhœa supervened, which by adding new symptoms, has rather increased than diminished it, and without great care a stricture will possibly be the result. In a case which I treated many years ago in the York Hospital, the swelling situated in the same place was as hard and as circumscribed as if a Barcelona nut had been inserted into the under part of the urethra. It was quite cartilaginous to the touch, and the man made his water almost by drops. I removed this disease by the repeated but careful application of the argentum nitratum, so that no signs of it remained externally, the hardness having gradually diminished until it went entirely away. The man, a soldier, was to have been discharged, but on leaning over his bed to fold up the blankets one morning, he fell forward dead. I opened him next day, and found his heart diseased. The urethra appeared quite sound, and to my great surprise nearly as much so at the part which had been affected as any other. I had a preparation made of it, and it is or ought to be in the museum at Chatham. Lest you should go away with the impression that a stricture of this kind may always be cured by caustic, I must mention to you the case of a gentleman who consulted me a short time afterwards. He had a similar swelling situated at the part where the scrotum joins the penis. I was delighted to have the case, and felt assured of a similar termination, but no such thing took place; the swelling and hardness increased rather than diminished, and at last I was obliged to divide the part from without inwards to save his life, by giving free passage to his water. I have since had many other cases of a like nature, all of which have been treated and relieved with various degrees of success, but none so pre-eminently well as the first.

You will ask me, perhaps, why? I can only say, it is as difficult to answer you on this point, as it is to tell you why in some cases of almost impermeable stricture, a permanent cure is effected by simple dilatation, whilst in others as nearly alike as possible, the relief obtained is only temporary. It depends on the various shades of distinction between diseases, and on the particular extent to which each peculiar structure is affected. Experience, assisted by careful observation, may enable us to select the best and least dangerous mode of treatment, but it has not as yet enabled us to mark all the distinctions and shades of difference between these diseases, which it is necessary we should know to arrive at a more perfect knowledge of their treatment." 81.

It is not evident, at all events to us, what the tumor to which Mr Guthrie alludes is actually composed of. He gives but one dissection, and in that he found nothing. Does Mr. Guthrie wish us to suppose that blood is effused into the corpus spongiosum, that it constitutes a soft and circumscribed swelling, that this, by some change in its component parts, afterwards grows hard, and becomes a source of stricture? This appears to us to be the gist of our author's observations and description. Yet this is attended with some little difficulty. In the first place it has not the demonstration of dissection—in the next, it does not seem easy to suppose that effused blood should form a limited swelling, in a cellular part like the corpus spongiosum. But, perhaps, we misconceive Mr. Guthrie's meaning; certainly we must own we never saw a case of the nature he describes. We have witnessed many instances of circumscribed swelling connected with the inferior part of the urethra, from its external orifice to the scrotum. But these swellings appeared to be abscesses, either connected with the lacunæ or dependent upon stricture.

Mr. Guthrie guards, with the utmost caution, against the imputation, that he limits stricture to the spongy part of the urethra. He merely affirms its preponderating frequency of occurrence in that portion. He approaches, and he does no more, a question of some delicacy and considerable difficulty —the exciting cause of stricture.

"The loss of elasticity of these parts is to be accounted for, and my belief is, that it is caused by inflammation in all its shades and stages. In this I support the opinions of Sir C. Bell, Mr. Shaw, and others, against those of Sir E. Home, Mr. Wilson, and those authors who have directly or indirectly taken a different view of the question; and attributed the contraction to a wrong action of muscular fibres which have not been satisfactorily shewn or proved to exist. The most remarkable fact on this point I have stated, viz. that in the membranous part of the urethra, which is known to be surrounded by a very powerful compressor muscle, the advocates for muscular contraction admit that permanent contraction does not usually take place; and if it does not take place there, it is and will be difficult to prove why it should occur from that cause anywhere else." 83.

In the next lecture, this question is considered more at length.

It is considered more at length, yet we do not suppose that Mr. Guthrie will feel mortified when we own that he does not satisfactorily decide it After briefly exposing the opinions of Mr. Hunter, Sir E. Home, and Sir C Bell, Mr. Guthrie observes that he has met with one case, and one only, of spasmodic stricture.

"The only case of pure spasmodic action, which has come under my observation, occurred in a gentleman, who has come to my house twice, in the course of several years, declaring he could not make his water, and desiring to have the catheter passed, which was each time done without the least difficulty. The first time he came he was quite aware of his situation; said it arose from anxiety of mind relating to family affairs, and that the passage of the instrument would immediately and effectually relieve him. If there was any obstacle, and I was by no means certain of there being any beyond a hesitation, it was at the commencement of the membranous part of the urethra, and arising, I suppose, from a spasmodic construction of the compressor urethræ of Mr. Wilson, of which I have given a detailed description. As this gentleman suffered no kind of inconvenience at any other time, I am induced to believe, that there was no particular irritation in the urethra, and that it was, as the cause is unknown, what may be called accidentally spasmodic. I have read of a lawyer, a gentleman, but I do not recollect where I saw it, who often suffered in this way when engaged long in court in a difficult case, and who was always relieved in a similar manner; but here I should say it is more than probable the individual was labouring under some slight permanent irritation in the urethra, or that it was at least in an excitable state at some one part near the bulb." 88.

Mr. Guthrie remarks, that the more common cases of what is considered spasmodic stricture are those of young men, who, when suffering from gleet or gonorrhœa, commit an excess in some stimulating liquid. Retention of urine, with violent straining and excessive agony ensues.

"These (says Mr. G.) are called cases of spasm, I call them cases of inflammation, and which induces a want of consent, as Sir Charles Bell expresses it, between the muscles of the parts, so that when the bladder acts, the muscles surrounding the urethra act by yielding and dilating as they ought to do, but remain, or become more permanently contracted; the urine is forced against the inflamed and contracted part of the urethra, and by its irritation increases the mischief. When the water is drawn off, the desire to pass it is removed, and the greatest irritation on the inflamed or irritable part of the urethra is thus taken away. Experience has also long pointed out to us, that when the patient can pass his water, the complaint is yielding, and the object is to get it to flow, and mechanical means in these cases will always do more than general ones, although I by no means deny their use as auxiliaries. If the case be more advanced, and the catheter will not pass, or you are at a distance from home and have not one small enough at hand, take a common bougie, and soften the point by dipping it into warm water, but which is not warm enough to melt the material of which it is composed, pass it down to the obstruction, and press it steadily, but not painfully so, against it, and let it remain for several minutes. It will often be found to pass on, or the patient will find on withdrawing it that he can pass his water in small quantities. The mischief here is a slight degree of inflammation, aggravated by cold or intemperance, but without any permanent alteration in the structure of the urethra, yet I do not believe it is caused by spasm." 91.

The experienced critic will too readily perceive that Mr. Guthrie asserts what he does not prove, and denies when he does not explain. We cordially agree with Mr. G. in believing, that what are considered cases of spasmodic stricture are really instances of inflammatory action, invading the urethra. But how does inflammation immediately give rise to retention of urine? Surely it must be by exciting spasmodic contraction of the muscles. No other physical alteration in the canal could appear so suddenly and act so perfectly.

Mr. Guthrie rejects the agency of spasm, but invokes the same spirit in another shape. The muscles are not spasmodically contracted, but "a want of consent exists between them." The term is elegant; but how does Mr.

Guthrie know that such discord distracts the muscular system? Besides, it implies no positive and obstinate contraction of one muscle, or one set of muscles; and yet such a positive contraction there must be, to render the whole power of the bladder nugatory in propelling the urine through the urethra. If, however, a want of consent means this, we submit that it is only another designation for the self-same thing. For our own parts, we entertain little doubt that the muscles surrounding the bulb, or the membranous part of the urethra, are in some cases spasmodically affected. The history and all the circumstances go to prove it; and we have seen the bougie, introduced into the strictured part, convulsively grasped, and even jerked, by the violent action of the muscles. At the same time we repeat our belief, that inflammation is a much more frequent cause of the spasm than is usually supposed, and we feel convinced that permanent stricture frequently results from the inattention of the surgeon to its inflammatory origin.

It is difficult to collect the opinions of Mr. Guthrie on the real nature of that temporary obstruction, which he feels disinclined to attribute, in general, to spasm. But the following passage is, perhaps, the most apposite we can select.

> "I am led to infer, from a due consideration of these and many other similar cases, that the canal of the urethra may be perfectly closed for a considerable length of time by a spasmodic contraction of its muscular coat of transitory kind, provided such muscular coat were believed to exist; but as such belief is not commonly entertained, I prefer supposing that the obstruction takes place from inflammation of the internal mucous membrane, which alters its attractions and properties, assisted by an undue contraction of the elastic and outer wall of the canal, dependent on its vital elasticity or contractibility. I believe this to be the case in all instances except those alluded to in the commencement of these observations, in which an undue action of the compressor urethræ muscle alone may have produced the effect." 100.

We are not much inclined to argue questions mainly hypothetical. But a more pugnacious reviewer might urge that, as Mr. Guthrie is willing to believe in the existence of spasm, provided a muscular apparatus be admitted; and, as spasmodic stricture is seated in a portion of the urethral canal, where muscles are actually demonstrable, the affirmative is virtually allowed by Mr. Guthrie. We will pass to the inspection of a case.

> "That a muscular coat or wall of a canal can exert an especial and long-continued influence upon it, I have had opportunities of seeing; and in one case in the œsophagus in a very remarkable manner. The patient, a young lady, had suffered for years from repeated difficulties in swallowing, which at last became positive obstructions, preventing the passage of either solids or fluids for days. The obstruction usually yielded almost suddenly, and the lady could then swallow liquids and small masses of food with tolerable ease. A good-sized œsophagus bougie could then be passed with little sense of opposition, although the stricture was distinct, when swallowing was impossible. It was situated about an inch below the situation of the cricoid cartilage, and no bougie could then be forced through it, although frequently attempted by several very able men. As the complaint continued, the impossibility of passing a particle of food became more frequent, and lasted for eighteen, twenty, and six and twenty days together, so that at last the lady became quite exhausted, and died from inanition, in the full possession of her senses, *and with a Christian resignation of so perfect and admirable a nature, that it was impossible to look upon it but with the strongest feelings of gratitude to God for his goodness.* On examination I found the œso-

phagus externally of its natural appearance, without the slightest sign of constriction. When slit open, it appeared of its usual thickness, and without any deviation from its ordinary state with respect to the appearance of the muscular layers; but on the inside, and adhering firmly to the mucous coat, there was a false membrane, the upper edge of which appeared to have been separated, in consequence of the repeated application of the bougie, and a little turned inwards, so as to fill up in part, the canal, through which, however, any common-sized bougie could after death be passed. The mucous membrane from this part onward to the stomach, which was not allowed to be examined, seemed to have lost its normal character, and to have taken on that of a serous one on which a false membrane readily forms, but which rarely occurs on a mucous one, unless some great alteration has previously taken place in it. The difficulty which existed at all times, for several months, arose from this false membrane, which could be peeled off, and resembled chamois leather; whilst the permanent and insurmountable obstacle, which often occurred for three weeks at a time, must have arisen in part, I conceive, from muscular contraction, although no trace of permanent stricture was observable after death." 99.

The preceding case is highly interesting, and rather curious. It appears difficult to suppose that an obstruction could depend, for such lengthened periods as three weeks, upon muscular contraction. There is another supposition, uncharitable we admit, but not utterly devoid of probability. It may be guessed from the mention of a case.

A female was attended by one of the most dexterous surgeons in London. She was said by him to labour under stricture of the œsophagus, through which no bougie, large or small, could be passed. After an attempt to introduce one, the patient was attacked with symptoms of inflammation of the lungs, and died in the course of a few days. On examination of the body, it was found that no stricture of the œsophagus existed. The extremity of the bougie had lacerated the mucous and cellular tissues of the œsophagus, inflammation of the external cellular tissue had resulted, and extending along the posterior mediastinum it had reached and affected the lung of the left side. We have heard of other not very dissimilar cases, and we entertain no doubt that stricture of the œsophagus is frequently thought by able surgeons to be present, when the instrument is impeded by other and more natural obstructions.

We have taken the liberty of placing in Italics a particular passage in Mr. Guthrie's narration of the case. It is that which refers to the edifying resignation of the patient. Such passages are strongly indicative of the piety, but not so conclusive of the judgment of the author. For the sceptic may perversely and ingeniously hint, that the goodness of God would have been carnally more manifest, in withholding the *cause* of misery and suffering, than in granting to the sufferer firmness to endure it. Yet the influence on Mr. Guthrie and on others was so salutary, as probably to compensate for the apparent evil.

We must pass over Mr. Guthrie's notice of permanent stricture of the urethra. We have hitherto considered little more than a third of the interesting volume before us. Our glance at the remainder must, we fear, be more hurried than its merits might demand.

The symptoms of stricture are well described. But they are familiar, and we need not reiterate them here. We shall merely draw attention to one circumstance.

> "The testes at an early period of prostate irritation often partake of disease. This has often been supposed to depend on sympathy, but I apprehend, and am inclined to believe with Mr. Abernethy, that it occurs from the continuous propagation of irritation from the opening of the ejaculatory ducts into this part of the urethra. The testes become uneasy, then painful, and a little swelled. In warm climates the irritation usually terminates in hydrocele, with a softened and enlarged, or sometimes a hardened and enlarged testis. In more northern climates, abscess occasionally takes place, or chronic induration is sometimes mistaken for scirrhus." 109.

The progress of pathology has done much toward routing the locust host of maladies depending upon "sympathy," and "irritation," and abstractions of a similar description. We would not be understood as denying that such things as sympathy and irritation exist. But there cannot be a doubt that the terms were much abused, and that actual and tangible organic alterations have been frequently neglected, in the loose and inexact philosophy that delighted in their liberal admission. Inflammation of the testis, in gonorrhœa, has often been described, and is constantly believed, to result from sympathetic irritation. Yet surely, when we see that a continuous tube connects the testis and the seat of gonorrhœa, it is much more natural and much more easy to believe that inflammatory action extends along it, than that some obsure and hocus-pocus process sets up disease at two distant points.

It is proper to advert to Mr. Guthrie's mode of examining the urethra, and the plan which he adopts for the cure of stricture.

In a young man, who makes his water in a tolerable stream, Mr. G. employs for the former purpose a solid silver sound, not more than two-thirds of the size of the canal. When a moderate-sized instrument cannot be passed, Mr. G. has recourse to a small bougie; and, if this cannot be introduced, he adopts another process.

> "In these cases, it will be necessary to take an impression of the face of the stricture, in order to discover where the opening is situated, by which means the point of the instrument may be more certainly directed to it. This is accomplished by means of a middle-sized bougie, the point of which is first softened by dipping it into hot water, or by a model bougie, the point of which is made of softer materials than the shaft. This should then be well oiled, and passed down to the stricture, against the face of which it is to be gently but steadily pressed. If the stricture, although narrow, is not very tough or permanent, it will sometimes yield, and the softer bougie goes through, when the point of the harder one only bends, twists, or turns back, the bougie having doubled on itself in the passage. If the stricture does not yield, the soft bougie does, and is gradually pressed into the sinuosities or openings on its surface; so that after remaining some minutes it is withdrawn with one or more processes projecting from the end of it, either acute or obtuse as the case may be, and indicating the commencement of the true, and sometimes also that of one or more false passages. The experience of the surgeon will now be his best guide; he will remember that this obstacle is much more often below than above, and that a channel in that direction is much more often a false than a true one." 119.

The seat and the size of the opening being obtained, a duly adapted instrument must be selected, and dexterity or good fortune must conduct it to the opening. If a bougie, it should be allowed to remain in for an hour; and if a catheter, it should be kept in altogether, unless the bladder is peculiarly irritable; and then it need not be carried into it, but be firmly fixed an inch beyond the stricture. This method is not however, necessary, and is often so inconvenient to the patient's pursuits that it cannot be adopted. Such is a brief outline of our author's method of examining a stricture.

The treatment, he observes, may consist of dilatation, the application of caustic, division, or the combination of all these measures. The following is his procedure by means of dilatation.

> "As an impassable stricture cannot be cured by dilatation, until such time as a passage is obtained through it sufficient to admit a small bougie, I shall for the present suppose that passage to exist. A bougie, of a size that will pass without inconvenience, is to be introduced and allowed to remain for an hour, and if the bougie is a little conical, the stricture may not only be completely filled by it but moderately dilated. If the stricture be very irritable, the soft bougie may be grasped and marked by it, and the same thing will occur if the bougie be too large and too strongly forced into it. If the bougie be rather too large at the point it will not proceed on meeting with the stricture, although sometimes by a gentle pressure for two or three minutes, the stricture will gradually yield and allow it to go through; but there is a probability that more irritation will follow this mode of proceeding than if a small one is first introduced for a quarter of an hour, and a larger one then made to take its place, which it will almost always readily do. This is in fact the principle on which dilatation should be conducted, and it will always be accomplished more safely and easily for the patient if done in that manner; for a larger bougie can always be introduced if it follows a small one, than can be got into the bladder without such a precursor. This is a fact that does not admit of a dispute. I never use the bougie as a mere dilating instrument oftener than every two days, and when the urethra is irritable only every three, and sometimes four days. Proceeding in this manner the stricture gradually yields, and a bougie, whether made of plaster or of silver, and as large as the orifice will permit to enter, will at last proceed through the whole passage without meeting with any obstacle; and it ought to be repeated at longer intervals untill this disposition for contraction seems to be removed. When a stricture has been a permanent one, the patient should be taught the manner of doing it, so that he may use it once a week, then once a fortnight, and at last once a month or quarter." 123.

If the orifice of the urethra is too small to admit of an instrument of requisite dimensions, its division downwards must be practised, a full-sized bougie being subsequently used every morning to prevent contraction during cicatrization. When the orifice has been enlarged, it is occasionally found that an instrument of the necessary size is not well borne by the portion of the urethra not actually strictured. Under these circumstances, surgeons have attempted to invent a sort of bulbous sound or bougie, which should operate exclusively upon the stricture. As a little consideration will shew the inevitable futility of such a scheme, we need not do more than remark, that Mr. Guthrie expended much time and trouble unsuccessfully in endeavouring to carry it into execution.

The destruction of stricture by the agency of caustic occupies the most considerable portion of the next (the ninth) lecture. Yet Mr. Guthrie owns that it is difficult, if not impossible, to apply with benefit the caustic, to such strictures as will not admit of the passage of a bougie; and doubts or denies the greater permanency of cure, when effected by caustic, than when owing to simple dilatation. Although it is true that the whole of the argument is not comprehended in the points affected by these admissions, the pith of it is certainly comprised in them. In short, if Mr. Guthrie be correct, the advantages of caustic must be very slight; for dilatation is necessary at first, when the stricture is most narrow, and necessary at last to obviate its recurrence. There may be, and probably there are, *some* cases in which the application of caustic may be serviceable. But balance the capricious and dubious advantages against the certain and general risk, and the practical scale goes heavily down on the side of danger and disgrace. To drop metaphor; caustic is deservedly rejected in the ordinary treatment of strictures of the urethra. We turn to another subject—the accession of paroxysms of fever subsequent to the introduction of a bougie.

Surgeons are familiar with this occurrence, and the means of preventing it have exercised their ingenuity, though probably without commensurate success. Sir Benjamin Brodie has imagined that the contact of urine with the urethra, after its irritability was excited by the bougie, might occasion the febrile accession. He recommended that the catheter should be retained in the urethra and bladder, in order to allow the urine to escape, without coming into contact with the sides of the urethra. We are bound to confess that we have seen rigors and fever supervene, when no urine was voided in the interval between the introduction of the instrument and occurrence of the rigor; and, in other instances, we have witnessed the latter when a catheter was kept in the urethra. On these facts we can speak with decision. Perhaps in this, as in many other cases, the simplest and most obvious explanation is the true one. Probably the mere introduction of the instrument occasions, by the impression on the nerves of the urethra, the rigor and concomitant phenomena. Mr. Guthrie offers the following suggestions.

> "When a paroxysm of fever is about to be produced in consequence of the irritation caused by the introduction of too large a bougie, the desire to pass water is urgent, but the patient is incapable of doing it, and the accession of the cold fit shews the course of the affection. This will be best alleviated by a grain of opium and ten grains of camphor, but the most efficient remedy is to pass a small elastic gum bougie through the stricture and fix it in the urethra for a few hours: it takes off the irritation, and often seems almost to arrest the paroxysm of fever. It is a practice which should never be neglected in serious cases, although it is rather in opposition to prevailing theories." 135.

We must own that we have found the introduction of an instrument more frequently aggravate than prove advantageous in cases of this nature. We lately had a patient, in whom the attempt to retain a gum catheter in the urethra, almost invariably gave rise to distinct intermittent fever. Undoubtedly a full dose of opium will prevent, at least in many cases, the accession of the paroxysm, but sometimes it will fail; and the treatment which usually answers best, is to keep the patient quiet and in bed, and not to persist in the introduction of instruments until the irritability of the urethra is diminished. Patience, and abstinence from violence, are highly requisite on the part of the surgeon. When the fever assumes, as it sometimes does, a distinctly intermitting type, quinine or arsenic becomes as useful as in ordinary intermittents.

The next point to which we would direct attention is hæmorrhage from the urethra. On this head, Mr. Guthrie relates some interesting facts. The most alarming hæmorrhages which he has seen have been, he informs us, "from common causes." He presents two specimens of this description.

*Case.* A gentleman had had a catheter passed by a surgeon of great reputation and ability in the morning, without inconvenience or pain. On his return home he found there was a considerable oozing of blood, which continued during the day, and induced him to send in the evening for his surgeon, who was unluckily out of town; the bleeding increased in the night, and in the morning early Mr. Guthrie saw him. There were several tubs of ice and water in the room, all apparently containing a considerable quantity of blood; his face was deadly pale, the pulse scarcely perceptible. The bleeding was arrested in a few minutes by pressure on the perineum, and did not re-appear.

*Case.* A tradesman passed for himself a common soft bougie, the point of which caught in some part of the urethra, and apparently penetrated into it. Bleeding supervened, and continued two days and two nights, when Mr. Guthrie was requested to visit him. Mr. G. found him kneeling in bed, and straining violently to pass his water, but which came with great difficulty, as the bladder contained a good deal of coagulated blood, which had passed backwards into it. He was as white as a sheet, and fell back in his bed, nearly insensible, almost as soon as Mr. Guthrie entered the room, having, as he said afterwards, passed several quarts of what (as it all coagulated) he considered to be pure blood. The bleeding was permanently stopped by pressure.

"For the purpose of knowing where to make the pressure, any light, flat, and narrow, but firm substance should be prepared, such as a piece of cork, which can always be procured. The patient should then force all the coagulated blood out of the urethra; and as the bleeding usually takes place in these cases from that part which is anterior to the triangular ligament, pressure can readily be made upon it externally; but as it may be made a little before or behind the exact spot, in either of which cases it would be useless, the selection of that spot must be well made. This is done by beginning as far back as possible, and gradually bringing forward the finger by which the pressure is made. At a certain point the flow or dripping of blood will be arrested, and the precise spot from which it comes will be in all probability a little behind where the finger rests, a fact which can also be easily ascertained by carrying the finger a little backwards, when the blood will again flow. The bit of cork or pad can now be duly placed, and the patient should be desired to make pressure on it himself, and which he can often more readily do than an assistant." 138.

When the hæmorrhage proceeds from the neck of the bladder, or prostatic part of the urethra, cold water, rest, and an opiate will arrest it, provided it is not caused by malignant disease. A case in point is given by our author.

*Case.* A gentleman passed a bougie for himself. It was larger than usual; and it caught on some fold at the entrance of the bladder, which it passed with a jerk. A continued bleeding was the consequence, accompanied by an urgent desire to make water, but which appeared to be blood, or nearly so. The desire soon became more urgent, and the difficulty of passing any thing greater, until at last complete retention ensued. In order to remedy the retention of urine, Mr. Guthrie passed a small gum-elastic catheter, which drew off a quantity of bloody urine, and relieved the irritation and desire existing at the neck of the bladder, which soon afterwards subsided. He then directed an opiate to be given, and sent the patient to his bed. Some blood oozed from the urethra, and the patient passed dark-coloured bloody urine for twenty-four hours afterwards, but the bleeding never returned.

Mr. Guthrie alludes to the reflux of blood from the urethra into the bladder, and the consequent plugging of the latter with coagulum. He observes that the proper practice to be pursued in such cases is to inject the bladder with warm water through a catheter with a single large eye on the side and a hole at the end, or by a double catheter, by the motions of which, in the first instance, the large coagulum may be in some degree broken up, when it is more readily dissolved by the water, so as to leave the urine quite clear in a few days, provided no more blood is poured into it.

Mr. Guthrie mentions the particulars of a case in which the hæmorrhage depended on malignant disease of the bladder. The source of the hæmorrhage was evident during life, from the circumstance of its being accompanied with shreds of what resembled medullary matter. He mentions also another case, more interesting on account of the obscurity surrounding the source of hæmorrhage. The patient was an elderly medical man, who occasionally voids dark-coloured bloody urine. The blood was supposed to proceed from the kidney, and various medicines were taken in consequence.

> " As some little difficulty seemed to exist on the first attempt to evacuate the bladder, and as the bleeding might arise from the irritation caused by a small stone, it became necessary to examine the urethra and bladder. Nothing could be made out, save a slight difficulty on entering the neck of the bladder with the sound No. 12, and which part offered a positive obstruction to No. 14, surmountable only by a little management of the points of the instrument. He has in fact the bar, or dam, I have pointed out as occasionally forming at this part, independently of any disease of the prostate ; and as he now finds that his urine is clear for many days together, and that he can always cause it to be a little bloody, either by passing a large bougie or by a little more than his ordinary exercise, he has acceded to my original opinion, that the blood comes from some enlarged veins at the neck of the bladder. He can now pass No. 14 through it with ease, and is much more free from the passage of blood than formerly. He therefore uses the solid silver sound once a fortnight, and has nearly abandoned that of internal medicine. I was led to believe that the veins of the neck of the bladder were enlarged, first from there being obviously some derangement of structure as well as of function at the part ; and from perceiving that the veins of the nose, as well as those of the glans and prepuce were very blue and tumid, appearing as if they did not truly transmit their blood through them ; and it struck me that those of the neck of the bladder might be in the same state. The sound only did good, or does good, by preventing the increase of the bar, and thereby rendering an undue action of the bladder unnecessary ; the part is in fact at rest." 141.

The tenth lecture is devoted to the consideration of suppression and retention of urine. Of the first we need say nothing ; of the second, not much ; for the subject has been lately worn till it is thread-bare. We may observe that Mr. Guthrie agrees with those, the best practical surgeons we are sure, who in cases of retention resort at once to the employment of the catheter or the bougie. If these fail, and in dexterous hands they seldom do so, it is then sufficient time to resort to the other and familiar train of remedies of a general description.

The operation of puncturing the bladder or urethra is necessary in the ratio of the surgeon's want of knowledge and adroitness. Yet sometimes it may become inevitable, and the choice of one of the many methods recommended, must present itself to our consideration. Mr. Guthrie prefers the puncture of the bladder through the rectum to that above the pubes. But he seems to prefer the opening into the urethra behind the stricture to either of these plans. We must take the liberty of quoting a passage of considerable length. It is Mr. Guthrie's description of his operation, a description which it would not be well to abridge.

"The patient being placed and secured, as in the operation for the stone, a catheter or sound is to be passed down to the stricture, and held steadily against it, the concavity being as usual upwards, the point directly applied to it. The rectum having been previously cleared by an enema, the fore-finger of the left hand being duly oiled, is to be introduced into it, and the membranous part of the urethra and the prostate are to be examined as well as the bladder, the state of which will in all probability have been previously investigated. If the membranous portion of the urethra is dilated by the urine, so much the better; but the object of introducing the fore-finger is to ascertain the relative situation of the upper part of the rectum and the urethra, which latter part only touches, or is nearly in direct application to the rectum, at the termination of its membranous part and the commencement of its prostatic portion. There is a certain distance, which is greater or less in different individuals, between the last inch of the rectum and the urethra placed above it. The two parts form two sides of a triangle, the apex of which is the prostate, the base the external skin. It is within the two lines of the triangle that the operation is to be done. The surgeon, taking the catheter in his right hand, whilst the fore-finger of the left is applied to the upper surface of the rectum, moves the point upwards and downwards, so as to communicate with the fore-finger of the left hand, and to convey to it a knowledge of the situation of the extremity of the instrument; and particularly of the distance between them, which the motions given to the catheter by the right hand will clearly indicate. The thickness of the parts between the obstruction and the rectum can be estimated with sufficient accuracy, both at the point where the left fore-finger is applied, and at the surface of the skin; for, although the membranous part of the urethra cannot be easily felt from an incision made on the left side of the perineum, it can always be distinguished from the rectum. The next step of the operation is to divide the skin, cellular membrane, fascia, muscular and tendinous fibres, which may intervene between the upper surface of the rectum and the under surface of the anterior and middle portions of the membranous part of the urethra. This is to be done by a straight, blunt-backed, narrow, sharp-pointed bistoury, fixed in its handle, and there are two ways of commencing the operation: the first, when the obstacle is behind the bulb and the external parts are not diseased, may be done by a straight incision, in a perpendicular direction; in which manner the operation may always be done if the surgeon is well acquainted with the anatomy of the parts; but if he is not, or they are very much hardened, and consequently unyielding, a transverse, curved, or crescentic incision should be made across the perineum, the centre of which corresponds with the raphe, and is one quarter of an inch above the verge of the anus, or as near that distance as may be, with due respect to the rectum. This gives room, and allows the parts to be separated as much as they will admit. If the transverse incision is not adopted, the point of the straight bistoury is to be placed on the skin a little above the verge of the anus, the cutting edge being above, the blunt back towards the rectum, the handle being a little depressed, the point a little inclined upwards. The degree of inclination necessary to carry the knife inwards for the distance of an inch, and clear of the rectum, will be indicated by the finger in that part, and the eye of the operator will correspond with the point of the fore-finger, so that the bistoury may be steadily pressed in to that extent, and then carried upwards, and brought out in the exact median line, making an external incision of at least an inch and a quarter to an inch and a half, as regards the external parts; and which may be then extended as space is wanted for the prosecution of the operation. The part being sponged, the surgeon again introduces the bistoury in the median line, the point being directed upwards and backwards towards the urethra, and he may then deepen the cut. The fore-finger in the rectum will always tell him where the back, and consequently where the point of the bistoury is. The opening will now be sufficiently large to allow the operator to lay aside the knife, and to feel for the urethra with the point of the fore-finger of the right hand, an assistant keeping the catheter steady against the stricture, the end of which will now be readily felt. If the point of the fore-finger of the right hand does not go beyond it and touch the sound part of the urethra, which is dilated by the urine in the generality of cases, the knife is to be resumed, and the fore-finger being withdrawn from the inside of the rectum, is to be placed in the wound, on the outside of the rectum, which is to be depressed as much as possible; the back of the knife is then to be turned to it, whilst the point exposes and opens the urethra, and which it can do very easily near the apex or transverse portion of the prostate, or at the termination of the membranous part of the urethra; but it is not necessary to go so far back, and the membranous portion may be opened at its middle with every advantage, and with perfect safety to the gut. A good anatomist and surgeon will open the urethra in this way sooner than the mode of doing it can be described, the urine will make its escape and the patient will be at once relieved. Whether the stricture shall be now divided or not, is a question presently to be considered: but the cure can be completed either with or without it." 170.

We present this proposal without further comment than recommending it to the notice of surgeons. Mr. Guthrie relates no case in which the operation was performed, and we suppose there can be little doubt of the execution being frequently attended with some difficulties.

In the following lecture, the eleventh, Mr. Guthrie considers seriatim the division or non-division of the stricture after the operation of opening the urethra behind it—the causes and the treatment of effusion of urine—and urinary fistula in the perineum. A few words on each of these points may be permitted.

1. Mr. Guthrie is eclectic in his notions and his practice with respect to the division of the stricture. He thinks that division is unnecessary in cases where the stricture is not of any great extent; cases in which the operation of opening the urethra behind it, removes the pressure of the urine upon it, and allows it to assume a quiescent and dilatable condition. On the other hand, he is of opinion that the stricture should be divided in completing the operation in all cases in which it is of a thickness, hardness, or extent, leading to the expectation of the cure being difficult or prolonged: for it must be borne in mind, that the incision in the perineum soon closes up, so as to become a very small opening, no better indeed than a fistulous one if the passage is not cleared; and that any particular delay in effecting this object, will bring the parts into the state they are in when the fistula in perineo has taken place from other causes, and which alone often requires another operation of nearly a similar nature for its cure.

The introduction of a catheter into the bladder after the division of the stricture appears to our author to be proper or improper, according to the condition of the bladder. If this organ is irritable or inflamed, the retention of an instrument is dangerous and mischievous. He rather recommends that an elastic gum catheter or a bougie may be passed through the divided part of the urethra into the posterior portion, and retained by tapes in this situation. This effects all the requisite good to the urethra, without the disadvantage of irritating the bladder.

Mr. Guthrie mentions some facts to prove that after the division of stricture from without the patient is exposed to a recurrence of the malady, unless he maintains the calibre of the passage by the frequent or occasional use of a bougie. All practical surgeons are well aware that stricture is seldom permanently cured, whatever the treatment may have been. The advocates, indeed, of particular methods have generally vaunted their power of preventing a relapse. But those acquainted with the subject have listened with a smile to the idle boast.

2. On the symptoms and the treatment of effusion of urine little at this time of day need be said. The employment of scarifications is now universally resorted to. But Mr. Guthrie offers one remark, which, in practice, is perhaps insufficiently remembered. He observes that scarifications are not effectual unless a free incision is made in the perineum, in any way the surgeon may choose according to the nature of the case, until the superficial fascia is fully divided, and a free and direct passage for the urine is obtained; so that there may be no possibility of its escaping into the surrounding cellular structure on account of the dependent outlet which is made for it. He proceeds to recommend that a solid sound or a catheter should be passed down the urethra to the stricture as a guide; and if it be as far down as six inches, an incision is to be made in the perineum, on either side, as may seem preferable, and nearly as in the operation for the stone; this is to be continued inwards, until the finger can distinguish the point of the instrument in the urethra, in front of the stricture behind which is the rupture or hole in the urethra; and the parts must be so divided that the urine will run directly out without further infiltration. He believes that it is always better to divide the stricture if possible, and to carry the catheter into the bladder, from whence the urine may occasionally be drawn off, provided the presence of the catheter is not productive of too much irritation. The last is an important salvo.

3. The profession are familiar with the fact that effusion of urine into the cellular tissue will occasion destruction of the scrotum. But they are not equally aware of the circumstance, that diffuse inflammation not unfrequently invades the cellular tissue of that part, independent of stricture, of urinous extravasation, or of any affection of the urinary organs. The patient is usually debilitated or broken down in health—the disease is commonly preceded by a rigor, or that general disturbance which is generally the precursor of cellular inflammation—it is sudden in its attack, rapid in its progress, and destructive in its consequences. The scrotum swells, and its skin is of a pale or dusky red—the swelling is of a boggy character, the pressure of the finger occasioning an indentation—the margin of the redness is not so distinct as in the erysipelas, nor has it the same disposition to extend to other portions of the body—after a short period the skin becomes darker and sloughs—the cellular tissue is then displayed, loaded with lymph, and itself sloughing—and the tunica vaginalis of the testes is

exposed. The only chance of arresting the mischief consists in the early employment of incisions. Yet such is, in general, the condition of the patient, that these, however early and boldly resorted to, are incapable of effecting the preservation of the scrotum. The following is the only notice of the malady taken by our author.

> "Erysipelas will sometimes attack the scrotum, and simulate the appearance derived from extravasation of urine. I was once called to a case of this kind, in which the scrotum was greatly distended, and I was at first sight disposed to attribute it to that cause, but the patient declared he not only could make his water well, but never had any difficulty in doing it. I was not, however, satisfied until I had passed a catheter, and assured myself that there was no disease in the urethra, nor in the perineum. The patient recovered, but lost a good deal of the skin of the scrotum by sloughing, in spite of several incisions into it, which saved the remaining portion." 185.

We have mentioned the chief circumstances which disprove the erysipelatous character of the affection. We have had the opportunity of witnessing four cases, and are amply satisfied of its really being inflammation of the cellular membrane of the scrotum.

The twelfth lecture exhausts the treatment of stricture. It is chiefly, we might almost say, totally devoted to the exposition and the advocacy of the method of introducing a bougie or catheter as far as the contraction, and retaining it in the urethra, so that its point may press upon the stricture. The majority of our readers are probably aware that this plan has been strenuously lauded by Dupuytren, and we need not do more than sketch with a light and a rapid pencil the steps of Mr. Guthrie.

It is when the stricture is permeable by the urine, but impassable by the bougie that the latter is employed in this especial manner. Mr. Guthrie prefers a hollow gum elastic bougie, of a medium size, perfectly smooth, and tolerably round at the point, so that it may give as little uneasiness as possible. A very small bougie gives more annoyance than a larger one, is retained with more difficulty, and is more likely to give rise to irritation, in which case it should be removed, and after a little delay, replaced by a larger one. The bougie is to be fixed in the urethra by tapes, and its free end should project rather less than an inch beyond the orifice of the urethra The point should press against, or rest upon the stricture with the greatest possible gentleness, so that it may not give rise to inflammation or to ulceration, and yet should press just so much as to cause absorption. The nice regulation of the pressure is pleasing to the fancy and apparently consonant with the practice of our author. Pain and irritation must not be excited; occasionally, if necessary, removals of the instrument may be allowed; but the period required for the instrument to penetrate the stricture, varies from three days to six weeks or perhaps more. Mr. Guthrie has never known the practice unsuccessful. The remainder of the cure, when the instrument has once been passed through the stricture consists in slow and and in cautious dilatation. Three cases are detailed; they are interesting and long. Perhaps the short passage which concludes the chapter expresses as much as any other portion of it. It is occupied with the remark that no one plan will succeed in all cases, and that he is the best and most practical surgeon who knows what method to apply to each. With this observation we dismiss the treatment of stricture.

Inflammation, and acute and chronic abscess of the prostate, with low inflammation or irritation of the prostatic portion of the urethra are the subject matters of the thirteenth lecture. Passing over the description of the symptoms and the treatment of acute inflammation of the prostate, we may pause to insert the useful advice of Mr. Guthrie with reference to the opening of prostatic abscess.

> "When," says he, "from the continuance of the disease, the occurrence of rigors, and the increase of the febrile symptoms, the augmented sense of fulness and tension in the perineum, and the greater difficulty of making water, the formation of matter may be presumed; an examination per rectum will often give considerable information. in addition to the swelling which may be perceived externally. It is very desirable the abscess should neither break into the rectum nor into the urethra, nor that the matter should insinuate itself behind the bladder, nor indeed go any where except to the surface. The same precautions should be observed, and the same practice followed, as in abscess by the side of the rectum, by making an early puncture. If matter should not follow on the first day, it generally will on the second, and the straight sharp-pointed bistoury should be used for this purpose, and pressed on, from the perineum through its deep fascia. by the side of the urethra, and above the rectum until the surgeon is assured that it has penetrated the swelling; the flow of matter from which will prove the fact, and the slight bleeding which will ensue must under such circumstances do good. An abscess which is opened in this way, or which opens of itself in this manner, usually heals with little difficulty. If it opens into the rectum it is always a serious matter, and it is by no means readily cured when it bursts into the urethra. If it passes behind the bladder death is often the result, after a very prolonged illness, of which I have seen some very unhappy examples." 215.

Chronic abscess is more common than acute. It generally occurs between the ages of forty and sixty, and is usually but not always the consequence of stricture. It occasions or accompanies chronic inflammation of the mucous membrane of the bladder, and fatal disease of the kidney. Mr Guthrie relates a striking instance of this complaint.

*Case.* An early friend of his was attacked about thirty years ago with uneasiness in the back part of the urethra, a great desire to make water and pain on passing it, without any discharge, but with a sense of fulness in the perineum, of weight in the hips and loins; the uneasiness was increased on evacuating the bowels. The gentleman was continually sitting with a lady to whom he was attached, but whom he could not marry. Three weeks of antiphlogistic treatment removed the symptoms in question. He experienced another attack at Lisbon in 1809; it yielded in a similar way. In the interval he had thrice had gonorrhœa, which each time was cured by copaiba. In 1817 he had another attack which was more obstinate, but ultimately yielded to a similar treatment, with the addition of a mild course of mercury. After this he married, and remained well for several years, but unhappily became a widower, and some months afterwards had a return of his complaint without any very evident cause. All the usual remedies now failed, and his disease gradually increased. During three years, he consulted all the most eminent surgeons in London, and at last died, completely exhausted, under the care of Dr. Prout. On opening the body, Mr. Guthrie found the prostate almost an empty sac, having been the seat of several abscesses communicating with the urethra. The internal surface of the bladder was in a state of chronic inflammation, but without ulceration, although, from the pain at the extremity of the penis, and the amazing quantity of discharge, almost apparently of a purulent nature mixed with the urine, considerable ulceration was expected. The ureters were much enlarged, and the kidneys diseased, that of the left side particularly being enlarged, and little more than an empty lobulated bag.

The treatment advised by Mr. Guthrie consists of injections into the bladder of warm water containing from half a grain to a grain of the acetate of morphia—the horizontal posture—and, after the matter has been discharged, change of air, tonics, the turpentines, and balsams, and opium. His remedies indeed are those of all judicious surgeons. Yet he has not alluded to a remedy as useful as any we have mentioned. It is the introduction and the maintenance of a seton in the perineum. We have found much benefit from its employment.

In every case of disease of the urethra, says Mr. Guthrie, great advantage and comfort will be derived from fomenting the perineum twice a day with a large sponge which has been dipped in hot water, or by sitting for a few minutes in the hip-bath.

" Twenty-nine pages are occupied with the description of chronic enlargement of the prostate gland. Yet the subject admits of so little novelty that our notice on this head may be brief. We shall merely allude to three insulated circumstances.

1. The ancient opinion that chronic enlargement of the prostate gland partakes of the character of scirrhus, is rejected by the accurate pathological knowledge of the present day. For other organs and tissues in the body are not found to be altered in connection with this complaint. Mr. Guthrie has, however, witnessed two cases in which the nearest absorbent glands appeared to be affected with chronic suppuration of a scrofulous description. In one individual, the prostate was larger than a closed hand, had partaken of a cheesy-like suppurative process of this kind, and the whole pelvis was nearly filled up by a mass of disease of a similar character.

2. When the prostate has become enlarged, the tumor prevents the complete evacuation of the bladder. The consequence of this is perhaps unexpected, and certainly remarkable. If, after the patient has attempted to empty the bladder of its contents, one or two ounces of urine are left in it, the desire to make water still continues, or scarcely subsides before it returns as strongly as ever, and requires a similar and unavailing effort to expel it. So that after a dozen trials half as many ounces only will be evacuated; whilst if the first two ounces be drawn off and the bladder is completely emptied, the patient will perhaps sleep for six or seven hours quietly; and when he awakes make the six or eight ounces of water at once, which he could only have done at a dozen trials without such precaution having been taken.

3. The last point is probably more speculative than practical. We shall suffer Mr. Guthrie to plead his own cause.

> " A question has arisen in my mind, whether any operation could be done on the prostate from the perineum; and I was led to entertain it from finding that in a patient on whom I had operated for stone, whose prostate gland was much enlarged, I had rendered him a further service in the diminution of the

prostate; so that instead of making his water with difficulty, he afterwards made it easily, and the catheter passed with facility, instead of meeting with a considerable obstacle at the neck of the bladder. In fact, I was satisfied I had cured or nearly so the disease of the left lobe of the prostate, which I found to be much enlarged during the operation. The success which ensued in this case, made me think the proceeding deserved further consideration, and I inquired of several of my surgical friends whether they had met with any thing of the kind. At that time none could speak affirmatively, with the exception of Sir William Blizard, who lent me an unpublished paper on the diseases of the prostate gland, which had been read at the Medical and Chirurgical Society in 1806, from which I have extracted the following observations and case." 252.

The observations and the case of the veteran surgeon may be properly reduced to this. That sometimes chronic abscess occasions or is attended with much surrounding thickening, and that free division or evacuation of the abscess will materially lessen if not remove the condensation. He applies this reasonable principle, or rather this indubitable fact to the instance of the prostate; and his case is one in which that gland was found after death to be greatly indurated and enlarged with a central follicle of pus in either lateral lobe. Sir William supposes that division might have been performed, and conjectures that it might have been successful. It is probable that the speculations of Mr. Guthrie and the case of Sir William Blizard will hardly be sufficient to tempt the surgeon to hazard a difficult and dangerous operation on a doubtful diagnosis for a dubious advantage.

Chronic thickening of the neck of the bladder, and acute and chronic inflammation of that organ occupy the fifteenth chapter of the work. Our attention may be usefully limited to the first.

The disease, says Mr. Guthrie, may commence at an early period of life, and though kept at bay by the employment of the catheter, is ready at all times and on any fit occasion to start into dangerous activity. It is generally, however, the disease of old age.

It usually begins in an insidious manner. The patient is ill, yet he knows not how; he has a more frequent desire to make water than formerly, particularly at night; it does not flow so readily nor so freely as it had usually done; and he is most free from irritation whilst his mind is particularly occupied, and especially after dinner, when he can often refrain from attempting to make water for four or five hours. The elasticity of the neck of the bladder is impaired, and the ordinary action of its muscular coat is incapable of perfectly emptying it. The urine does not now flow so readily as heretofore, and the patient strains to expel it. He suffers uneasiness, which increases to pain, and this, though relieved on discharging a little urine, speedily returns; for the bladder is now never completely emptied, and the urine which remains is a source of great irritation, although the quantity is really inconsiderable. The urine at first is clear, afterwards it becomes a little turbid, small shreds of mucus or of fibrine are seen floating in it, soon to be followed by a deposit of the same character, which becomes in turn glairy, viscid, and even resembling pus. At first it is acid, and continues so until this deposit takes place in quantity, when the whole on standing may be alkaline, as in the enlargement of the prostate, although the newly-secreted urine is acid. In the commencement of the complaint the urine is not albuminous, but after a time it may become so.

The efforts to make water lead to the formation of pouches in the bladder, and to chronic, or acute inflammation of that organ. In short, the usual train of sequlæ is observed, which follow on obstruction to the free evacuation of the urine.

A glance at the preceding symptoms might convince the practical and unbiassed surgeon, that although Mr. Guthrie has faithfully described an affection hitherto unnoticed or neglected, those symptoms are not so determinate as might be wished. They are such as enlargement of the prostate may produce, and their character is probably too vague to allow a definitive diagnosis to be founded on them. Such at least appears to us to be the fact. Yet, perhaps, in opposition to this it may be urged that enlargement of the prostate, if present, may be ascertained. Be that as it may, we proceed to the next and the concluding chapter, in which Mr. Guthrie discusses the treatment of "the bar at the neck of the bladder." That treatment consists of suggestions rather than results. It may be closely packed.

When the disease, chronic thickening of the structure at the neck of the bladder occasioning what Mr. Guthrie terms "the bar," occurs in persons under or about the middle term of life, the steady use of the solid silver sound, gradually increasing the size of the instrument to the largest the urethra will permit, slowly accomplishes a cure. Yet the catheter, as in cases of stricture of the urethra, or enlargement of the prostate, must be passed now and then to prevent a relapse. In this, as in most diseases of the bladder, Mr. Guthrie is a zealous patron of the practice of washing out the bladder by injections of warm water, sometimes combined with opium or with morphia. Mr. G. has caught the spirit of Jesse Foot, whose ardent pamphlet on the manifold advantages of the vesicæ lotura may probably be familiar to some of our readers.

> "The silver catheter or the solid sound are not however always competent to effect a cure, or even to give relief when passed from time to time. The incapability of emptying the bladder, of evacuating even an ounce of urine, remains unrelieved, although the silver catheter is introduced twice and even oftener in the twenty-four hours. The attempt to dilate the neck of the bladder by a larger or by a dilating instrument, only brings on pain and increases the evil, so that it is obliged to be given up for a smaller instrument than the one originally used, until the irritation thus caused shall have subsided. In these cases recourse must be had to the permanent catheter, or one which is retained constantly in the bladder, and which, by its slow and gradual operation leads to the absorption of the bar or stricture in the same manner as it leads to the beating down of an enlarged portion of the prostate gland. I have reason to believe that I have succeeded in this way in many instances in affording relief, that could not be obtained by either of the other means indicated; but these cases may also have been accompanied by disease of the prostate, a point which dissection alone could verify." 273.

But these means may fail, and the possibility or chance of advantage from an operation presents itself, of course, to the mind of the operating surgeon. Mr. Guthrie hints that, "the bar" may be divided, and growing more confident as he proceeds, he presently proposes to divide it. The instrument which he approves, and has twice employed, is a modification, perhaps an improvement of that of Mr. Stafford, containing a central perforator or lancet, capable of cutting on the side, and of being easily cleaned. When the nature of the case has been "well ascertained," the knife being projected just as the instrument is felt to be passing over the bar, will incise it, and if, after it has just passed into the bladder, it be withdrawn, the knife, in returning, will enlarge the incision. The latter, indeed, may be entirely made by the retiring motion of the instrument, the cutting blade of which is only unsheathed in its withdrawal. Mr. Guthrie allows that this is rather a suggestion, than the confident announcement of trial and success.

> "If the bar be thin or narrow, I have no doubt of the possibility of dividing it in this way without doing mischief; and in two cases in which I have tried it, I have reason to believe the object was effected, from the greater facility with which the catheter afterwards passed into the bladder, and from the relief obtained in passing the urine." 277.

Even in the latter periods of the case, when complications of a serious description have been the result of its continuance, Mr. Guthrie discovers a gleam of hope reflected from the blade of the scalpel.

> "In the very advanced stages of the disease, when the bar is fully formed, when pouches exist, and the mucous membrane is in a state of chronic inflammation, giving rise to an almost continued and irresistible desire to make water, whilst the agony in passing a few drops is extreme; I believe it will be found, that an operation similar in its effects, but milder in its nature than that for the stone, is the one which ought to be had recourse to, if relief is to be obtained from operative surgery." 279.

We fear that few surgeons would venture, and few patients would permit, the performance of an operation resembling, though mildly, that for the stone. The suffering is certain and immediate, the danger not to be contemned, the advantage dubious and remote. Yet the candid reader will not hastily reject the specious proposition.

Here we must take our leave of Mr. Guthrie, a zealous, an active, and an able author. The length of our notice is sufficient evidence of the value we set on this gentleman's writings. A pert reviewer might select some passages for quibbling and for cavil; a generous critic regards the execution and the tenor of the whole—acknowledges the claims of observation applied to the elucidation of a complicated subject; and does not befoul with the harpy talons of a hidden and a hungry disputant, the table spread before him by one who stands honourably high with the profession.

## THE ELEMENTS OF ANATOMY. By *Jones Quain*, M. D. Professor of Anatomy and Physiology in the University of London. Third Edition, revised and enlarged.

THE comparative rapidity with which this work has passed through two editions, and attained a third, is primâ facie evidence of its deserts. The popularity of Mr. Quain as a teacher of anatomy, and the enormous class which he is said to instruct, contribute, beyond doubt, to promote the sale of the system before us.

Perhaps we may be permitted to avail ourselves of the present opportunity of offering a few remarks on the subject of anatomy. It is impossible for any who are conversant with the method of teaching now practised in the *best* metropolitan schools, to avoid perceiving the great alteration which that method has experienced in the last few years. Mr. Abernethy, we believe, was the first to adopt a slip-slop mode of lecturing, in which minute and rigid demonstration was sacrificed, and a very superficial description of anatomy was patched and garnished with trimmings of physiology, pathology, and therapeutics. The lecturers of the Abernethian school resembled very closely that liberal cook, who offered for threepence a dinner consisting of "roast and boiled." He kept his word; but, when the covers were removed, potatoes were the only dish.

The abandonment of minute anatomy, and the association of pathology and surgery along with it, offered a short cut and an easy path to the deluded student. The lecture-room and manual were occupied alike with his very promising and very profitless species of instruction. Much was said, but little taught; and if the student had not the fortune to be made a jack of all trades, he certainly was not a master of anatomy.

The publication of the work of M. Cloquet, and its speedy appearance in an English form, effected a rapid, if not total, overthrow of the system of lecturing to which we have adverted. Exactness of description and precision of information took the place of the vague generalities of that system, and the retail rubbish of pathology and surgery were excluded from the anatomical theatre.

We do not affirm that the superficial lecturers are entirely defunct, or that some do not still neglect their proper business—the teaching of anatomy, for the purpose of foisting their cheap and nasty specimens of pathology and surgery upon their pupils. Yet such lecturers are not popular; they are shunned as idle praters or absolute impostors, and the race of *fainéants* must quickly disappear. Peace to their manes! They belong as certainly to a former age, as if they had been born two centuries ago.

The work of Mr. Quain is not absolutely free from the contagion of the period now happily gone by. There is in it a disposition to mix up other things with the actual subject, to fit up the dissecting-case with the matériel of surgery. The forms of hernia, the taxis, the operations are introduced—the history of lithotomy is given—the modes of securing the arteries are detailed. We hold that it is better for each to confine himself to his own occupation—for the lecturer on anatomy to stick to that—and the lecturer on surgery to teach surgery only. Each were wise to arrange and display his appropriate wares, rather than to filch some trivial and some shewy article from his neighbour's stock.

Ne sutor ultrà crepidam.

As an instance of the mischief resulting from this dabbling in other persons' ponds, we would cite Mr. Quain's hasty notice of the recto-vesical operation, for extracting a stone from the bladder.

> "The *recto-vesical* operation consists in laying open the bladder in the middle line by cutting from below upwards, beginning in the rectum, and so laying the two cavities into one. I mention it merely because it has been practised by M. Sanson in Paris, and M. Vacca Berlingieri in Pisa. It is not sanctioned by any

surgeon in this country, nor is it likely to meet with much approval, as it contravenes one of the first principles of surgery, which prescribes that we are not to wound any important parts which can be avoided." 461.

It is not correct that the recto-vesical operation is not sanctioned by any surgeon in this country. Sir Benjamin Brodie performed it two or three years ago. And it would not be difficult to shew that circumstances occasionally justify, or even require its selection. We might cite other instances of the dubious character of the surgical observations in the present work. It is enough to shew, that such "double skimm'd skie blue" as an anatomical lecturer can afford, we mean in point of space, is neither useful nor ornamental. We would strongly advise Mr. Quain to strike out the surgical patches from the volume, when it reaches, as it soon will do, the fourth edition. It is sufficient praise to write a good treatise on anatomy. The credit is rather diminished than increased, by the negative addition of some very common-place surgical remarks.*

It may seem that we have dealt over much in censure. If so, it has been kindly meant, with the view and in the hope, that Mr. Quain would purge his excellent work of almost the only materia morbi about it. But we cannot part from the author or our readers without a more cordial introduction, and a recommendation that each should grow thoroughly acquainted with the other. As an instance of the instruction derivable from a close acquaintance with the former, we may cite a passage selected without care, and calculated to display the general features of the volume. It is the narrative of the course and description of the sources of the internal jugular vein.

"INTERNAL JUGULAR VEIN.

*Vena jugularis interna.*—The blood from the brain and cranial cavity is received by the internal jugular veins, which are continuous at their upper extremities with the lateral sinuses; whilst inferiorly, they terminate in the brachio-cephalic veins. The junction of the vein with the sinus is at the broad part of the foramen lacerum (*fossa jugularis*,) beneath which it is supported by the rectus laterales muscle, and lies close at the outer side of the internal carotid artery, as far as the cornu of the os hyoides. Now, as the part of the vessel which extends from the skull to this point corresponds with the internal carotid artery, and receives its residual blood, it may with much propriety (and also with advantage, as tending to render the nomenclature uniform) be called *vena carotis interna*. Some confusion would arise from calling it "cephalica,' as the external superficial vein of the arm has, without any proper reason, received that name. Again, the short vessel which extends downwards from the junction of the facial and temporal veins and joins the preceding, may, for the like reason be called *vena carotis externa*; and finally, the trunk which results from the conflux of these vessels, and which extends thence down to the inner end of the clavicle, should be called *vena carotis communis*. At present, the entire length of the vessel included between the point just named and the base of the skull, is known as the internal 'jugular' vein, as if it belonged to the throat, and had no correspondence in its divisions and distribution with the artery which it accompanies. However, we must defer to usage, and continue for the present so to name it.

The internal jugular vein having passed down to a level with the os hyoides, receives the common trunk formed by the facial and temporal veins, and then becomes considerably enlarged. It descends parallel with the common carotid artery, lying at its outside enclosed in the same sheath, together with the vagus nerve, and at the root of the neck joins nearly at a right angle with the subclavian vein, and so forms the innominata, or brachio-cephalic. Previously to its junction with the facial vein, the internal jugular receives branches from the tongue, pharynx, and occiput:—*Vena lingualis* commences at the side and upper surface of the tongue, passes backwards, receiving branches from the sublingual gland; occasionally the ranine vein joins it, sometimes also the pharyngeal. In either case it passes backwards between the mylo-hyoideus and hyo-glossus muscles, to open into the jugular vein. *Vena pharyngea* commences at the back and sides of the pharynx, and terminates in the lingual, or separately in the jugular vein. *Vena occipitalis* corresponds in its course, and in the distribution of its branches, with the artery of the same name. It communicates with a plexus of veins on the outside of the occiput, and terminates occasionally in the external jugular vein, but more frequently in the internal.

---

* Mr. Quain may fall back on the example of Mr. Harrison. The worst part of that gentleman's excellent work upon the arteries is its surgical cement.

*Vena laryngea* is a small vessel whose branches come out of the larynx through the thyro-hyoid membrane; they unite and form one vein, which opens into the internal jugular (its anterior or facial division): sometimes it terminates in the superior thyroid vein.

*Vena thyroidea superior* arises by ramusculi, which ramify in the thyroid gland, in company with the branches of the superior thyroid artery. These unite and form a single vessel, which runs transversely outwards, and opens into the jugular vein (its common trunk.) Lower down we find another branch coming from the source (*vena thyroidea media.*)" 578.

## THE MORBID ANATOMY OF THE HUMAN EYE. By *James Wardrop,* Surgeon to the late King. Illustrated by coloured plates. Second edition. Two vols. 8vo. pp. 175—263. Plates XVIII. Churchill, London, 1834.

The following advertisement to this edition is seldom presented to the public by authors.

### ADVERTISEMENT.

"Nothing would have prevented the Author from supplying the demand which has for some years past been made for this work, but difficulties in getting the plates as accurately coloured as in the former edition, and he embraces this opportunity of remarking, that although twenty-six years have elapsed since the Morbid Anatomy of the Eye was first published, the care with which he selected the materials is satisfactorily proved by the circumstance, that subsequent researches in this interesting department of Pathology have not contributed any additional facts to render any alteration in the work desirable."

This statement, if correct, and no doubt it is so, constitutes no common praise. Yet while it displays the merits of the work it precludes a more circumstantial notice of its contents. We will only add, that the precision of detail displayed in the writing, is equalled by the clearness of engraving and of colouring exhibited in the plates. Probably the majority of well-informed surgeons are already in possession of the first edition. Those of our readers who are not, will do well to make themselves possessors of the present.

## AN INTRODUCTORY LECTURE TO THE MEDICAL CLASSES IN KING'S COLLEGE, LONDON. By *Herbert Mayo*, F.R.S. Professor of Anatomy, &c. &c. &c. 8vo. stitched, pp. 28. London, 1834.

We know not whether the love of fame or the hope of profit induces lecturers to give their introductory discourses to the world. Perhaps the former feeling usually predominates, and the memory of the cheer that burst upon the orator as he blushed and bowed, pursues him in the triumphal homeward march, and warms him to daring deeds of print. However this may be, it is certain that many a good twenty pounds is ungrudgingly devoted to the propagation of lectures introductory and valedictory. We will not say that the sordid calculations of mercenary minds would be generally satisfied by the returns. Yet there cannot be a doubt that the convenient pamphlet is frequently applied to necessary purposes, and the philosophic butterman or trunkmaker has often the advantage of conversing at his leisure with learned and eloquent professors.

We are induced to notice Mr. Mayo's lecture, because it adverts to the engrossing subject of general and medical education. We agree with Mr. Mayo that in this the most important improvements have been made, and that we cannot yet fully appreciate their consequences. But this is so obvious as to constitute a trueism, and we pass to an interesting question—the comparative utility of classical and mathematical attainments.

Mr. Mayo supposes, or seems to suppose, that the tendency of the day is to disparage the cultivation of classical literature, to despise the monuments of genius and taste contained in the languages of Greece and Rome.

> "The acquirements," says he, "to which I am disposed to assign the first place, are a knowledge of the classical languages of antiquity, and an acquaintance with classical literature. It is the tone with some at the present day to undervalue these attainments, which hitherto have constituted the basis of what has been emphatically called a *liberal education*, to consider the reverence entertained by many for them, as a prejudice which is on the eve of being dispelled, and to recommend in their place the adoption of studies of more *practical* utility. For my own part, I am willing to argue the value of these studies, on the ground of their usefulness alone." 7.

We doubt the reality of Mr. Mayo's fears, and we question if any, whose opinion is regarded or worthy of regard, would desire to substitute any studies whatever for those of a classical description. But we know there is a feeling, a strong, and we believe a most judicious, feeling against the abuse of classical instruction—against the ridiculous and monkish system pursued at many of our public schools. It is notorious that, at many of those establishments, the boy is crammed with Latin and with Greek, to the absolute exclusion of other information. Educated at one of the great public schools ourselves, we can feelingly depict and deplore the monstrous and insane inadequacy of their method to effect the real objects of tuition. The generality of the boys so educated acquire not much of the two dead languages they study, and nothing of that knowledge which lives and breathes.

The utilitarians of the present day have published a crusade against the continuance of this antique folly—have exposed and denounced the exclusive study of the classics—and have recommended, what all men of common sense must approve, the comprehension of the modern European languages. French, German, and Italian, with the sober and exact studies of geography, arithmetic, and mathematics, in the general scheme of youthful education. At the school where the middle classes are instructed, the description of study is as wide as this. If the aristocracy will persist in debarring their sons and their connexions from the useful knowledge of the useful ranks, it requires little foresight to descry the changes which society will undergo. The hard necessities of an industrious nation will refuse to respect what is merely ornamental.

It may be delightful, but it is not permitted us, to pursue through the fair regions of ancient taste and genius, the charms and the advantages of classic lore. The mind not imbued with its beauties and its fictions is no better than an untilled waste; it may be a strong and a hardy soil—but the fairest flowers and the richest herbage find no life nor shelter there.

Monumens du Genie, heureuses fictions,
Vous savez animer l'air, la terre, et les mers;
Vous embellissex l'Univers.

An acquaintance with the more accessible treasures of antiquity is indispensable alike for the gentleman and man of taste. Without it, we could not mix with elegant society, nor be received as the associate of men of cultivated understandings. To borrow another passage from that eloquent "Apology for fiction," which proves while it defends, the classical predilections of the sovereign wit of France:—

On chérira toujours les erreurs de la Gréce,
Toujours Ovide charmera;
Si nos peuples nouveux sont Chrétiens à la messe,
Ils sont Payens à l'Opera.

Mr. Mayo has not forgotten that classical learning is possessed of immediate and appreciable utility.

"As language is the instrument of thought, the basis of intellectual education should be the mastery of language. *One* language, it is true, rich and various as our own, should be sufficient to contain and express each element of human learning and thought. But it happens, that our native language, a compound of several tongues, is borrowed to so great an extent from the Latin, that its force and meaning, nay its construction, cannot be perfectly mastered, without a knowledge of that language at the least. I do not advert to terms of science, when asserting that the English language is imperfectly understood by the mere English student. These, derived principally from the Greek, it is evident must appear to *him* a barbarous and difficult, as well as an unmeaning nomenclature. But almost all our general and abstract terms have a Latin etymology; and their spirit cannot be perfectly caught, unless the language in which they were formed is known, in which the transition was made from sensible images to general expressions." 8.

We need not pursue the subject any further. We believe that no reasonable, certainly no well-informed writer has attempted to abolish classical instruction. But in our public schools, and, perhaps, in some of our private seminaries, it has been most unwisely erected into the beginning and the end of the knowledge adapted and conveyed to youth. This is an abuse that common sense of the present day will tolerate no longer.

Mr. Mayo has appeared the enthusiastic champion of the classics. His defence of mathematics is cold and dull. It looks, in pugilistic language like a *cross.*

> "It admits of a question, to what extent mathematical studies should form a part of medical education. Pure and mixed mathematics, the method of analysis, and its application to natural philosophy, constitute indeed the fairest triumph of human reason. The greatest intellect, that ever rose above humanity, found in these studies, and in the order of nature which they serve to elucidate. the single subject worthy its genius. But mathematical studies have no direct application to medicine; and if a time is to come, when physiology shall rank among the exact sciences, that period is certainly very distant. To the medical student, mathematical studies may seem therefore to have little value, except as an exercise and discipline of the understanding. It has been thought by some that their value even in this respect is equivocal; and it has been argued, not without plausibility, that the habit of looking for demonstration unfits the intellect for weighing moral truth; and that in proportion as the mind is accustomed to absolute certainty in every step of reasoning, in so far does its power of estimating probability suffer by disuse; while a distaste is acquired for any study, to which demonstration does not apply." **11.**

The extent to which mathematical studies should be cultivated may probably admit of question. But no question can exist with respect to the advantage of some, we say much, mathematical knowledge. The anticipation of two great a disposition towards exactness on the part of surgeons and physicians, is more calculated, we think, to amuse than to alarm. One might almost reply to the apprehensive gentlemen who dread the application of analysis to medicine, in the consolatory tone of the captain to his passenger, who asked, "if there was any fear"—"Plenty of fear, Ma'am, but no danger."

There is indeed one sufficient answer to those whose timidity or prudence would set limits to the acquisition of this or that species of knowledge. Those limits are always too easily attained, and the spur is in general more necessary than the curb. The period assigned to elementary and general study is commonly too brief to procure what is desirable, seldom sufficient to allow the most able and zealous neophyte to pursue coy learning to a dangerous distance. We will venture to assure Mr. Mayo and others, that they need not be afraid of the youth designed for business or professions, enjoying leisure or evincing the desire to proceed too deeply into classics, mathematics, or any other mine of human knowledge. Let but the system of education be judicious, and there cannot be too much of it. In that system exact studies should form a very large component part.

We know not that there remain any general questions, on which we may introduce the lecturer or ourselves. Yet we cannot refrain from giving utterance to a remark not more complimentary than true. The lecture before us is a fair example of the cultivated taste and the acute observation, begot from the acquirements which it eloquently advocates.

The medical portion of the lecture is respectable—the physiological, interesting though brief. Utilitarians in journalism, we cannot allow this brief article to depart without ballasting its light and general argosy, with a keel of substantial inflammation.

Mr. Mayo's description of the vital phenomena in the living egg is a beautiful abstraction of fact and observation. He takes it, and "looks where life is sleeping, at that which is to form it."

"We may follow," says he, "in the living egg, the changes recently discovered to take place in it, new in our philosophy, which begin when the influence of one chemical agent is made to tell. There is in the egg, resting immediately upon the yelk, a little circular disc of the thinnest membrane. Its diameter is no greater than one-sixth of an inch. It is divided into an outer zone, and an inner, clearer, and more transparent part, called the colliquamentum. This disc of membrane is all the trace of the future chick. It is called the cicatricula, germ spot, germinal membrane, or blastoderma.

When the egg is exposed to the proper temperature, the process of development begins. Six hours after incubation has commenced, a small dark line may, with the aid of a magnifying glass, be discovered towards the centre of the transparent area. This line, which is called the primitive trace, is swollen at one extremity, and is placed in the direction of the transverse axis of the egg. The rounded end is towards the left, when the small end of the egg is turned from us.

Towards the twelfth or fourteenth hour of incubation, the germinal membrane expands itself into a larger area; and at the same time acquiring thickness, it separates into two layers. Of these the outer is called the serous layer. The inner, in contact with the yelk, is termed the mucous. The two layers appear each to consist of coherent granules. After these two layers have appeared, a third is formed in the interval between them; this is called the vascular layer: it has a more intimate connection with the inner or mucous layer than with the outer or serous.

The primitive trace is placed in the outer or serous layer. About the eighteenth hour, two ridges are raised from the serous layer, one on either side of the primitive trace, inclosing a furrow. This furrow soon becomes closed at the swollen extremity of the primitive trace, at which part it is of a pyriform shape, being wider here than at any other part. Thus the serous layer, thickening round the primitive trace, shapes itself into the figure of a body and trunk: having absorbed from the albumen the material necessary for its growth.

In the canal formed as it has been described, a semi-fluid matter appears, which, on its acquiring more consistency, becomes the rudiment of the spinal marrow. The same matter collects in the pyriform chamber at the top into three bladders, which are the rudiment of the brain. As the brain and spinal marrow, so are the bones, nerves, muscles, and tegumentary systems of the body, developed in the outer or serous layer.

The inner or mucous layer, folding itself while it expands, forms the rudiment of the alimentary canal.

The middle or vascular layer originates the heart and blood-vessels; and, conjointly with the mucous layer, the glandular system and the lungs." 18.

We cannot conclude without expressing the pleasure we have felt in glancing over this published lecture. Trifle as it is, we lay it down with a heightened opinion of the intelligence and attainments of its author.

# Periscope;

OR,

# CIRCUMSPECTIVE REVIEW.

"Ore trahit quodcunque potest, atque addit acervo."

## I.

## SPIRIT OF THE ENGLISH PERIODICALS, AND NOTICES OF ENGLISH MEDICAL LITERATURE.

### Practical Hints on the Treatment of several Diseases. By Dr. J. Peacock, of Darlington.

This is an unpretending little volume, containing the veteran author's observations on the treatment of several ills to which flesh is heir. Dr. Peacock informs us that he is hastening to that bourne whence no traveller returns. We hope he has many days of bright sunshine before him on this side of that formidable pass. Be this as it may, he has laid his brethren under obligations for the present volume, which deals very little in speculation, but much in practice. The cases are detailed without any reference to order or nosological arrangement, being apparently copied verbatim from the case-book. The manuscript was submitted to the examination of Dr. Elliotson, who observed, that "the cases were highly interesting, and hoped the author would publish them, as his object was to do good, and acquire honorable reputation."—*Pref.*

I. A case of most extensive sloughing, not only of the tonsils, but of the whole of the fauces, was arrested in its destructive progress by the following mixture, which would, with difficulty, be borne by a sound throat.

℞. Confect. aromat.
Pulv. zingib. āā ʒj.
Carb. ammon. ʒj.
Tinct. opii. ʒij.
Aquæ menth. pip. ℥viij.

Misce et capiat coch, ij. mag. alternis horis.

II. A soldier quartered at Darlington, became jealous of his wife, and determined to starve himself. He lay in an open cow-shed, during cold weather, for five days, without food. When found, he was carried to a public house, and had brandy imprudently administered to him. This brought on violent inflammation in his legs, followed by gangrene. Spirituous applications were made to the legs, and a mixture, similar to the foregoing formula, was exhibited internally. At the end of four days "the skin, muscles and fat were as cleanly dissected off as if done by Lawrence himself." Notwithstanding this he speedily recovered, and "was enabled to mount his new legs." We suspect that some error has crept into the text here. Had the *muscles* been destroyed, we doubt the probability of this soldier's ever mounting other than wooden legs afterwards.

Some other cases of sphacelus are related, where the good effects of opiates, stimulants, and nutritious diet were conspicuous.

III. *Diabetes.* Our author formed an opinion long ago, that diabetes originated in acidity of the stomach. He met with a military gentleman, aged 50, a good deal wasted with this complaint, all the usual symptoms being present. He prescribed ten leeches to the epigastrium, opened the bowels, and then exhibited five grains of carb. ferri, one grain of opium, three grains of pulv. aromat. ʒj. of creta preparata, the same of gum arabic, and three grains of pulv. jacobi veri, every four hours, day and night. He was told to use his own discretion as to food, but to drink only water. At the end of a fortnight he came to our author quite a new man. "From a withered old fellow he had become corky and facetious, and begged me to fix the day when we could have a bottle of wine together." Whether the doctor and patient cracked the bottle together, we are not informed; but the medicine was continued for a month longer, when he appeared perfectly recovered.

Our author has come to place great reliance on this plan, especially when the patients are not broken down with organic diseases. Two additional cases are detailed, and which support the author's assertions.

IV. *Dropsy.* Dr. P. has no specific for this complaint, which is, indeed, only the sequence of some other malady. In one case he was successful with Fowler's tincture of tobacco.

V. *Neuralgia Ophthalmica.* After a long prevalence of cold easterly winds at Darlington, in the year 1826, rheumatic complaints prevailed. In one case, a shepherd who had been much exposed, became affected with severe pain, irregularly intermittent, in the centre of his eye-balls. When the attack came on, it was generally attended by deep-seated pain in the head, and convulsions. The antiphlogistic plan had been tried, under the idea of cerebral inflammation; but Dr. P. adopted a stimulating treatment, consisting of tinct. guaiaci ammoniat. and opium, which succeeded, though with difficulty. A great number of similar cases afterwards occurred, and gave way to the same means.

VI. *Pain from Exhaustion.* Dr. P. is not quite certain whether or not he is right in the title of this chapter. Not being inclined to theorize, he leaves others to set the matter at rest. A gentleman between forty and fifty years of age, came to Middleton, affected with a violent and deep-seated pain in his head, which, upon using any strong exertion, threw him into convulsions of the epileptic kind. He had been afflicted with moral ills of a distressing kind. His pulse was 86—eyes not red; but the pupils rather dilated—urine pale. He had undergone considerable depletion. After emptying the bowels, the following powder was given every six hours.

℞. Pulv. ipecac. compos. gr. vj.
—— aromat. gr. iij.
Sub. hydrarg.
Opii, āā gr. ss. M.

"This medicine released him from his sufferings very soon, so that, in a few days, he was able to go home."

"I was called in to consult upon the case of a carpenter, in Piersebridge, who had long suffered under an intense pain in the head, which had, with some reason, been supposed to proceed from occasional inflammation of the membranes of the brain. The pupil of his eyes were rather contracted; his pulse from a hundred to a hundred and ten, when the pain was bad; and when it was upon him a sudden shake, or a false step, was very inconvenient.—The depletory practice was pushed to no purpose.—This case was a puzzle; but the compound ipecacuanha, with small doses of opium and calomel, restored him." 38.

VII. The three following cases are, (says Dr. P.) so incredible, that he is obliged to give the names, so that they may be authenticated, if doubted.—They will probably excite the risible muscles of some of our readers.

I. "H. Thompson Esq. was brought up at Bowes, near Barnard-Castle, where he has a brother at present; he was of that class called yeomanry. But about middle life he engaged with two others in a very extensive commercial speculation, and happening to succeed, they were left immensely rich; and when this gentleman sent for me he had a most sumptuous establishment of carriages and servants. Mrs. Terry, of Darlington, had requested him to put himself under my care, and he took a house about half a mile from Darlington; but whilst his house was getting ready, it came into his head to consult a noted physician at Newcastle, from whence he returned without experiencing any relief.—This, he told me, was the thirtieth physician he had consulted since the commencement of the disease, and the fiftieth surgeon. His disease was constipation of the bowels; he had been six months and two weeks without any discharge that could be called a stool of any kind or consistence. When our patient was hungry, he swallowed any thing he took a fancy to; such as game, half-raw beef-steaks, rich soups, &c. &c. And about half an hour afterwards, he irritated his throat with two or three feathers, which made him disgorge what he had taken, and in a few hours he was fit for another meal. Sometimes he made a little urine, but very little and thick, and about an orange colour; and some such orange-coloured fluid as this came up with what he vomited: but it would have required the pencil of John Martin to have given any idea of the horrors which beset you when engaged in a tête à tête with this scarcely human being. The cuticle was nearly the colour of very old mahogany, and adhered so closely to the bone, that a careless person might have mistaken it for veneering, or a covering of the bone with a dark pigment.—Mr. T. was more than six feet high, with large bones, and so much emaciated, that I have proposed frequently, as a query, whether it was possible to scrape an ounce of flesh off his bones from any part of his body: he could not ride upon the softest carriage seat,—so that when he attempted exercise he rested upon his wife's arm, and could paddle about fifty yards in a day.—Their house, in Blackwell, was surrounded with a high wall, and frequently the poor villagers had to pay for the gratification of their curiosity, by peeping into the garden when he was using exercise; for it was not uncommon for the women and children to take fits when they got a glimpse of him,—indeed their screams were beyond description, and at length their gates had to be locked entirely. When you patted his sides with your fingers, you were conscious you were striking a large wallet of pebbles—he scarcely had any suffering which could be called pain.—I examined him very minutely, and among other questions I asked him if he was ever sick, and he said never in his life; at this I could not help breaking out into a laugh in his face, for which he gravely rebuked me for making his misfortune the source of merriment,—but I certainly never had so pleasant a laugh in my life, for it immediately struck me that this monster of a skeleton might be made well; and as it tickled my fancy, I laughed again and again; and I am not quite sure whether my patient did not send to his friend, Mrs. Terry, to ask if the physician she had sent him was quite SANE; however we commenced operations the very next day, and in less than two days he had discharged a full peck of excrement, which had a much nearer resemblance to a peck of black marbles than to any thing else; they were quite as hard, but rather larger, than marbles, and as black as jet, and very little of the natural fœtor. I had put together a very weak purging mixture of the common composition, two tablespoonfuls of which he was directed to take every four hours. —Now, the practical physician will see the occasion of my merriment when it broke out; and if I had not told him what I was about, he would have put five or six grains of antimon. tartar to ℥viij. What were the fifty surgeons and thirty physicians doing during the last six months that they could not hit upon a purgative as mild in its operation as manna is to an infant? for it really did not incommode him at all.—He had not pain nor griping. The only ALARM rested with the POTTERS, among whom, our grape shot made sad destruction. After this, Mr. T. got his flesh apace, and left Darlington in good health, as many here can bear evidence of."

"2. The following case was nearly as marvellous as the last. I was told that DIANA COLTMAN had come to see me from Winton, near Sigston, Northallerton; it was a warm day, and she had come extended upon a mattress on an open car, with very great difficulty;

she looked as if she had been a good looking girl, but much emaciated; indeed the account she gave of herself was, that she had been confined in her bed upwards of three years, during which time she had never taken a mouthful of meat, not even bread.—When she attempted a small morsel, it threw a violent pain into her stomach, which was immediately felt in her head, accompanied sometimes with copious vomitings of blood, and loss of intellect.—At any time if her head was raised she lost her senses, and all power over her legs and arms; but her senses returned when she was laid horizontally. It was curious that ripe fruit never disagreed with her; she could take half an orange, a plum, or a cherry, with a high relish, and never threw them up—the same with gooseberries or grapes. The most striking feature was the loss of sense when her head was raised, and of muscular power in her limbs; when she came to me, her bowels were very slow, but by taking, during the day, ℈j. pilul. cœrul. hydrarg. and as much of the pilul. c. extr. colocynth and washing it down with a mild saline mixture, her bowels became temperate, and her mouth never affected; her urine was scarce till her bowels performed their office well, when we had no further difficulty; her tongue was dry and white, till she had got to take ℈j, of the blue pill every day. She had frequently taken ʒss. a day, which never occasioned ptyalism; indeed I have remarked upon several occasions, that when a patient took large and repeated doses of mercury to act upon them, it was generally very successful when it did act. Whether this was a spinal case was never demonstrated—from its mode of cure I guessed it was. From the mystery in which the disease was enveloped, many unfavourable reports were circulated,—but I firmly believe without any foundation in truth; indeed the notice with which she had been honored by many respectable families in the neighbourhood, was a guarantee that nothing unfair had been practised upon their credulity. And the clergyman of the parish, a gentleman of considerable information, whose benevolence was very largely exercised in supplying the wants of this poor creature, had there been any attempt to counterfeit, would, long before she came to Darlington, have unveiled the impostor. By degrees she suffered her head to be raised a little several times a day, and the convulsions gradually subsided; but this was effected by a good neighbour, a very strong woman, who had the power of moving her in her arms with great facility, and lost no time during night and day to accustom her to a change of position. On her first arrival at Darlington, her stools were dark, but came gradually to their natural hue,—her diet, whilst here, was chiefly apples and pears, and when she attempted to make it more nutritive her sufferings gradually subsided. I think she was here about three months."

The third of these wonderful cases we must also give in the quaint and original language of the author.

3. "Mr. William Trufitt, a farmer at Huttonbonville, near Northallerton, had been some time under the care of the faculty of that neighbourhood, in an obstinate diarrhœa; at last they sent for me; I forget how long he had been confined to his bed, but he was almost as shocking an object to look at as Mr. Thompson, with his black marbles. As soon as ever Mr. Trufitt eat any thing, he had a strong pressure to stool, which came away almost unchanged, and not in the least feculent; he had much thirst, and sometimes his stools were quite limpid, and as thin as gruel, and very little at a time; he really seemed as if he was made on purpose for drinking, although at other times a very sober man;—from being so very bony and thin, his skin was sloughing off from all parts of him. Astringent medicines by the mouth, as well as enemata, had been fully tried, but did not give ease; his pulse was forty—I was not to let him sink without an effort.—I recommended to his family to rub into his arms and thighs ʒss. ung. hydrarg. fort. during every six hours, night and day. I need not comment as I go along; the experienced physician will see what I am about;—

his diet was now lean broth without any vegetables. At the end of the sixth day there was no peculiar smell in his breath, nor any soreness or redness of the gums. I was resolved, if possible, to have a determination to his upper works. They still rubbed on, and I gave my patient five drops of Fowler's SOLUTIO MINERALIS three times a day, in a spoonful of spring water.—On the fourth day of giving this medicine, the countenance was evidently bloated—but pytalism had not ensued; but I nevertheless sang Io Pæans all the way home. It is only a man who has the interest and credit of his profession entirely at heart who can be aware of the pleasure I felt in returning home that evening. I had not miscalculated—he recovered gradually, but straight-forward, from that day. Ptyalism was a failure. We frequently meet with people who are proof against MERCURY,—but the enlargement of the head, and the eruption upon the skin, did the business equally well. In intricate cases, I have been frequently helped out by this revulsionary practice, and were it more studied in the hands of attentive practitioners, it might be brought to do much good.

VIII. In cases of obstinate constipation bordering on inflammation, Dr. P. avers that he " never failed to succeed when he was content with giving a quarter of a grain of calomel every quarter of an hour, particularly if he began with the calomel before the retchings came on." He justly observes that practitioners are often defeated in these complaints by giving too much medicine by the mouth, and thus increasing the irritability of the stomach. In cholera, our author and his partner, Dr. Macfarlane, tried the plan of giving a grain of calomel every ten minutes, washing it down with a little cold water. They did not lose a patient.

IX. *Pain in the Stomach, with Indigestion.* Dr. P. is a staunch advocate of the Broussaian doctrine of dyspepsia—namely, that it consists of chronic gastritis, and lauds the exhibition of "mucilaginous drinks acidulated with lemon-juice, and debarring his patients from eating animal food, &c." We suspect that our veteran confrere of Darlington has not suffered much from indigestion, or he would not have been so warm in his praises of acid slops in that complaint. The notorious fact that dyspeptics can (nine out of ten) digest animal food much easier than vegetable, is a proof that the disease is far more nearly allied to gastralgia than to gastritis.

X. *Headaches.* Dr. P. must surely regret his advance on Time's list, since he must have been one of the most successful practitioners that ever lived. Most physicians become sceptical as to the great efficacy of medicine, as they get old; but Dr. Peacock is just the reverse. His remedies are infallible, and consequently his success complete.

" We frequently meet with people who have most violent and distracting head-aches from various and opposite causes, yet always difficult of relief.—The cases are so one like another, and the cure accomplished by such simple means, it is hardly worth while running into the detail of cases—although my memory would furnish me with ten or twenty at a call. But let those who are subject to such dreadful pangs take the following medicine as directed, and I shall be much disappointed if a few minutes does not convince the sufferer of its efficacy.

℞. Bac. Capsic.i ℈ij.
Gum Arabic, gr. x.
Syr. Alb. q. s. ft. Pil. xx. quar. sum. iv. 2da. quaq. hora dolore urgenti.

It is useful to wash them down with a little cold water—but there is seldom occasion to take more than one dose as they take away the pain like magic."

XI. For sciatica and tic douloureux, which our author considers as twin-sisters, his sheet-anchor is the seeds of stramonium. The following is the formula he employs.

℞. Bac. Capsici, ʒj.
Calomel, gr. x.
Sem. Stramonii, ʒij.

Muc. G. Arab. q. s. Ut ft. pil. lx. quarum sumat. 1 quarta quaque hora. He also administers a couple of grains of opium occasionally during the continuance of the pain. Five drops of Fowler's solution are also given twice a day.

We have now extracted the substance from Dr. Peacock's book, and given it a greater extent of publicity than it would be likely to attain as a monograph—or rather a polygraph. We are not much disposed to censure mere manner or style in a medical book; but we think Dr. Elliotson would have done the author of the work which we have reviewed a favour, if he had smoothed some parts of the language employed in it. Dr. P. is evidently one of the old school; and we have no right to expect the introduction of modern pathology in a brochure, which merely aims at conveying some practical hints to the author's less experienced brethren.

## J. LATHAM, ESQ. ON UTERINE HÆMORRHAGE.

This subject has occupied much space, of late, in the medical journals. In our Liverpool contemporary of June last, there are two papers on uterine hæmorrhage in the same Number—one by Mr. Banner, the other by Mr. Latham. The latter gentleman writes from an experience of more than 30 years, and his observations are deserving of notice. He remarks that, if a patient has suffered from hæmorrhage in a former confinement, he would rupture the membranes as soon as practicable, with the view of exciting the uterus to early contraction. When the pains are violent, threatening hasty delivery, he endeavours to retard somewhat the expulsion of the child's head by moderate pressure on the perinæum. The body of the child, also, he leaves to the natural expulsion of the uterus. He strongly advocates a band round the abdomen with several folds of napkin over the region of the uterus. A careful and early examination of the uterus should be made, and its contraction hastened, by extending the hands over the uterine region, and firmly and evenly grasping it, the patient lying on her back. "Time and experience (says he) have convinced me of the advantage of these means in particular, when persevered in, over all others."

## THE TRIUMPH OF TRUTH AND GOOD SENSE, &c.*

The design of this little brochure is undoubtedly good, and the execution may be respectable; but the result must necessarily prove a decided failure. "The triumph of truth!" Dr. De Mey must be a greenhorn. In our younger days—"when the heart promised what the fancy drew" — we dreamt of such triumphs, and frequently aspirated the adage of the sage —"omnia vincit veritas." But we have long ceased to entertain such Utopian notions—as far, at least, as quackery is concerned. The very motto of the pamphlet before us—the text of the author himself—might have taught him the inutility of his sermon.

> "The world is nat'rally adverse
> To all the truth it sees or hears;—
> But swallows nonsense and a lie,
> With greediness and gluttony."

How, then, can Dr. De Mey expect that the world will swallow his "Triumph of Truth," when it has so many of Morison's pills and other nostrums to swallow? He might just as well "whistle jigs to a mile stone," under the hope that that steady personage would dance a minuet to his music, as preach to the world against the dangers of quackery, the excoriations of Long, and the drenchings of Morison and Co. Besides, the public might very naturally turn round on the worthy Doctor, and ask him what he thought of such taking titles as "Consumption curable," and many other *regular* quackeries! We think that medical men had better leave admonitions of this kind to judges, magistrates, coroners, and non-professional writers, since harangues against charlatanism are always read with distrust, when they emanate from the faculty. The evil must cure itself, by the punishment that pursues folly, in physic as well as in every thing else. Solomon has said, and Dr. De Mey has quoted the sentiment—that "bread of deceit is sweet to man; but afterwards his mouth shall be filled with gravel." If, therefore, the various classes of society, from the peer to the peasant, prefer gamboge to other medicines for the cure of all diseases, let them have their choice, in God's name! In no other country is there a greater redundancy of population than in this —in no land is quackery more effectual, as a preventive check to this redundancy than in happy Old England. Why, then, attempt to cripple its beneficial influence by admonitions, which are seldom read by the public, and generally distrusted, if read. So deeply rooted in the human mind is the love of quackery, that even the frightful exhibitions of Long's and Morison's handyworks produce but a momentary sensation. In fine, if quackery be an evil, medical admonitions, ex cathedra, will never mend it. We, therefore, advise our brethren to be silent on the subject, except when their evidence is solicited in courts of justice.

---

* By Dr. De Mey. Octavo, sewed, pp. 30. 1834.

## A TREATISE ON GOUT. By DAVID LEESE, M.D.

Dr. Leese has been very moderate. He has only given us a small brochure of 47 pages on the intricate subject of gout. Yet he might have condensed his treatise into 47 lines, without much loss to his readers. The author became affected with gout 31 years ago, and treated himself, with indifferent success, till the year 1818, when his attention was attracted to Sir Everard Home's paper on colchicum. He had recourse to this remedy, in small doses, combined with vinum ipecac. and has experienced the best effects from the said combination, aided by proper regimen. This is the sum and substance of the pamphlet. We subjoin an extract respecting diet, which is not uninstructive.

"It may be proper in this place to remark, contemplating the disease, as I do, a variety of inflammation, that during the early stage of an attack, when leeching may be found necessary, the diet of the patient should be in accordance; consequently, a more abstemious system should be resorted to than he is accustomed to in health, or when the violence of the attack has been subdued. I shall not say much on the subject of diet, the disease does not often attack persons till they arrive at years of maturity, when every one's common sense should teach him to avoid what he has found to disagree with him; keeping in mind that intemperance and excess are fruitful sources of disease, especially of Gout, and as it is not in accordance with my opinion to treat it as an humoral disease, there is less occasion to go into minutiæ on this head. Nevertheless, it is necessary to give some general advice on that point. Much must depend on habits and station in life:—and, first, it may be observed, that excess in quantity, and in variety of wine or viands, is *nearly as much** to be deprecated as quality; to blend a variety of heterogeneous articles in the stomach is doing the utmost to produce a fermentative process there; engendering thereby flatulence, dyspepsia, and, consequently, imperfect chylification. Who has not felt or found the acid eructations consequent on such a proceeding? Abstinence is not necessary for the gouty, but simplicity in diet is essential. At the principal meal, or dinner, which should not be taken later than four o'clock, there is no objection to mutton, beef (not salted), lamb, poultry, game, or venison, but not with high sauce; or, fish *in season*, and alternately; but let not the arthritic partake of more than two of these at one repast, avoiding generally, pastry, and what are called made-dishes; batter or bread-pudding may be added to the two articles *selected for the day*. Spirits in all their various forms, and delusive names, I hold utterly objectionable, and malt liquor should be avoided, considering it much better to drink water, or toast and water during dinner, even to the admission of a glass more wine than might otherwise be allowable. If soup be taken, it should be of the simplest kind; for instance, gravy with vermicelli. Brown bread made of flour, from which only the coarsest bran has been taken (but none of the farinaceous parts), may, with great advantage, be substituted for the bakers' bread of London; if this cannot be obtained, biscuit may be taken. Wine is a very important consideration connected with the diet of that class of persons subject to Gout. The quantity should depend much on previous habits; but, I am of opinion, as a medium rule, a pint of sound wine may be taken with impunity during and after dinner, when free from an attack; and the first rule as to choice, I think, is, that which has been found to agree best, avoiding the delusion, though, of considering *that* the *best*, which has been found most apt to fix a wandering, or *direct* a misplaced Gout, to some part more agreeable to the fancy —and I am of opinion that Madeira wine, from some latent acid or other quality, has obtained so much favour, because it is *most productive of Gout:* if the digestive powers of the stomach be good, I know of no wine better than sound old Port, that has deposited its tartar; should this not agree or not please, the next to be preferred is sound old Sherry. I have drank some Hermitage, to which I think no objection could be made. Claret may be taken, but should be carefully chosen, none but the very best being admissible. Two or three glasses of Sauterne wine may be drank (drunk): Hock and Cyder should be avoided.

---

* He might have said "much more."—EDS.

With these few and simple remedies I have named, may every case of Gout be combated and subdued, as certainly and safely as any other severe disease, and all the deformity and decrepitude we too often witness prevented."

Dr. Leese has amused himself (probably during some comfortable immunity from gout) with a laugh at the absurd speculations which have been hazarded by eminent physicians, ancient and modern, respecting the nature and treatment of this painful malady. We have been too poor and too industrious to be honoured with visits from this aristocratic guest—therefore we cannot lay claim to so much personal experience as Dr. Leese is possessed of. We have seen a little of the complaint, however; and we cannot by any means agree with our author, that gout differs in nothing from common inflammation, except from the nature of the parts which it attacks. Why does gout so generally affect certain parts? Why did Dr. Leese so regularly have attacks of inflammation in his *great toe*, after indulging in East India Madeira? This looks something like a specific inflammation. How did it happen that the worthy Doctor's nose did not sometimes turn red, instead of his great toe?

## HEMIPLEGIA IN PREGNANCY.

There are very few cases on record, where a female has suffered apoplexy and hemiplegia in the last stage of pregnancy, and come through delivery with ease and safety. A case of this kind is recorded by Dr. O. Roberts, in the Liverpool Medical Journal for June last. The female, aged 40, was seized with apoplexy in the middle of the ninth month of pregnancy. She was copiously bled, and when she came to her senses, one side was completely paralysed. Nevertheless, labour took place, and both child and placenta were expelled before the accoucheur could arrive. The uterus contracted well, and no flooding occurred. A case nearly similar is related by Dr. Kellie, of Leith, in Cheyne's work on apoplexy. The woman was in the last month of pregnancy, and had a regular apoplectic attack, followed by complete paralysis of the right side. She was safely and easily delivered of a living child. She died of the apoplectic attack, however, a day or two afterwards. These two cases are deserving of record, as marks to guide the prognosis in similar emergencies.

## Carditis—Cephalitis?

In the fifth Number of the Quarterly Medical Review, Dr. Stroud has narrated, with great minuteness, a case of the above nature. The patient was a married woman, aged 31 years, the mother of four children, and then suckling, though with difficulty. She had been labouring for a fortnight previously under febrile symptoms, with pain in the back of the head, at the pit of the stomach, and in the loins and limbs. She now has cough, sleeps little, and is sometimes delirious. The pulse is 130, and weak. The tongue white, with red edges—thirst—anorexia—urine natural—bowels confined. The cause of these phenomena is attributed to fatigue, anxiety of mind, and exposure to cold air. Leeches to the temples—salines—sudorifics. This was on the 15th Nov. 1831. 20th. Not much change. The head to be shaved, and the infant weaned. The pulse is nearly 140, and weak—troublesome cough, and hurried respiration. *Soothing medicine.* 22d. Pain in the back of the head severe, with some intolerance of light—face flushed—pupils contracted—sleep interrupted—delirium occasional. Cupping—mercurial frictions—salines. 23d. Pulse 120 to 140, and very weak—tinnitus aurium—cough troublesome, with "hurried breathing, frothy expectoration, and pain in the middle of the chest." Venesection to eight ounces—blister to the chest—salines—mercurial frictions. 25th. Bore the bleeding well—blood nearly natural—gums slightly affected—pulse 130, and feeble. 27th. Cough dry—breathing hurried—delirium—pulse very frequent and feeble—"respiratory murmur, now for the first time examined, is sufficiently audible." Venesec. ad ℥viij., salines, aperients, digitalis. 29th. Relieved by the bleeding—blood nearly natural. "The action of the heart, examined this day for the first time, was found to be very strong, although the pulse at the wrist was extremely small and weak." Venesection to 12 or 16 ounces—leeches to the præcordial region, &c. Dec. 3d. The bleeding and leeches gave relief. "The patient is considerably better." Pulse 112, hard dry cough. 5th. Patient rather worse—pulse 120. V.S. ad ℥viij. vel ℥xij. 7th. A miliary eruption has appeared on the head and neck, accompanied by profuse perspiration. The heart sometimes palpitates; but the breathing is tranquil—pulse 120, and weak. 18th. Pulse 140, and excessively weak. On the 28th, we find that a previous bleeding had given great relief, and that the pulse had fallen to 98, the action of the heart being tranquil, and the breathing easy.

We need not pursue the narrative any longer. She menstruated on the 8th of January; and we find that, in the middle of February, the pulse was still 120 and weak, in the sitting posture and after walking. She afterwards slowly recovered, retaining for some time a disposition to irregularity of the heart's action. She became pregnant—was safely delivered, but unable to suckle well her child. In February, 1833, she had a slight return of the cardiac affection, from which she recovered by antiphlogistic treatment.

*Remarks.* We were a little surprised, on perusing the above case, to see that auscultation was not employed till 12 days after Dr. Stroud had commenced his attendance—and, even then, the action of the heart was not examined. Two days afterwards, when that organ was examined, we venture to say that Dr. Stroud was surprised to find it in a state exactly the reverse of that indicated by the pulse. The depletive measures were then employed with a bolder hand, and we find a corresponding relief obtained. The case is very valuable, as exemplifying the exceeding fallacy of the pulse. Very few would have ventured on venesection at all, if guided by the state of the pulse in the foregoing case; yet we have not the smallest doubt that carditis was going on from the beginning. We are inclined to think that the affection of the head was secondary, or owing to the rapid circulation rather than to actual inflammation. Nothing is more common than these sensorial disturbances, when the central organ of the circulation is in a state of inflammation, or even excitement. We have no fault to find with Dr. Stroud's pathology or therapeutics; but we are much deceived if the above case does not put him more on his guard, in similar cases, for the future, and induce him to compare the action of the heart itself with that of the arteries, whenever there is any doubt as to the state and condition of the circulation. We advise all practitioners to examine the state of the heart and lungs in *all* cases—were it only for the sake of becoming intimately acquainted with the *normal*, as well as abnormal functions of the thoracic organs.

---

### ENDEMIC DYSENTERY.

The Edinburgh Charity Workhouse was visited with a severe dysentery, in the years 1832 and 3, of which Dr. J. Smith has given an account in a recent Number of our Edinburgh contemporary. The house stands in the healthiest part of the town, but the inmates are generally infirm, especially on entering the asylum, though they gain flesh and retain good health while there. The diet is chiefly vegetable and farinaceous, with a small proportion of animal food. During Summer and Autumn, they are usually affected with bowel-complaints, "as diarrhœa, dysentery and English cholera." In the Winter and Spring of 1832, when the epidemic cholera was at its height in the Lunatic Asylum, 150 yards distant from the workhouse, the inhabitants of the latter escaped—partly, Dr. Smith thinks, from the rigid quarantine established there! Nevertheless, in July of the same year, dysentery broke through the rigid barrier, and scourged the paupers. That this dysentery was a grade of the epidemic cholera which prevailed in the less healthy parts of the town, is as clear as the sun at noon day. The following description will satisfy the most sceptical.

"The attack generally commenced with vomiting and purging, pain of the abdomen, and a considerable degree of fever, the pulse in many cases being frequent and sharp, and the skin dry and hot. In others, however, a degree of collapse followed the vomiting and purging, the pulse was small and feeble, the surface cold or covered with clammy perspiration, and the features sunk. In some cases diarrhœa went on for several days, when *tormina* and *tenesmus* succeeded. The matter vomited was generally the ingesta or mucus. It was seldom or never bilious. The pain of abdomen varied very much both in degree and in situation, although it was very generally referred to the umbilical and hypogastric regions.

The epigastric region was often the seat of it, and then there was great irritability of stomach, and vomiting, and a constant burning sensation. In some, the abdominal tenderness was very trifling; but this by no means indicated a mild form of the disease, for the patients to whom this happened, feeling no pain often allowed the disease to go on till it was in its worst stage. The state of the tongue was various; at the commencement, when fever was present, it was dry and furred. It was often coated in the centre, but moist and red at the edges. This might be considered the most frequent condition of the tongue. In the most aggravated cases it was dry, parched, and red; and in some, when the other symptoms denoted a severe form of the disease, it was almost natural. Thirst was generally an urgent symptom, but more particularly in the advanced stage of the disease, when there was great gastric pain and irritation. In such cases there was a constant desire for cold water to relieve the burning sensation in the stomach.

The sound of the voice was in many cases peculiar; it was low and whispering, particularly when there were symptoms of collapse. The respiration was not affected in such a way as to be remarked as a characteristic symptom. Tenesmus was present in every case, and in the advanced stages the distress attending it was truly harassing. The desire to go to stool was constant, from the feeling that there was always something in the rectum to be evacuated, and the patient, if allowed, would never have ceased straining.

The appearance of the dejections was very various, but always without bile."

To us it appears clear, that the above disease was owing to the general epidemic influence then prevailing, but modified by the insulated locality, diet, and other circumstances of the institution.

On dissection, the large intestines were found thickened, ulcerated, and otherwise organically affected. The submucous tissue was highly injected. These changes were far from being the cause of the dysentery—they were most undoubtedly the *effects*. They aggravated the disease, and were the chief cause of the fatal termination; but they were not the *cause* of the dysentery. In many fatal cases of typhus, we find ulceration of the bowels; but it is an erroneous opinion, that these ulcers constitute the essential pathology of typhus.

*Treatment.* Our author having witnessed the good effects of large doses of calomel in Asiatic Cholera, and having failed in his treatment of the dysentery by the more common means, had recourse to scruple doses of the submuriate.

"It occurred to me, that between the symptoms of cholera and the endemic I had to contend with, there was considerable resemblance. Both diseases came on in the same way, by vomiting and purging. What was ejected, although not the same in both, yet agreed in this particular circumstance, that it was without bile. There was a burning sensation at the pit of the stomach, along with a desire for cold water in both. The *post-mortem* appearances exhibited this similarity, that the gall-bladder in both diseases was found invariably distended with bile."

The result proved that he was right in his conjectures respecting the affinity of the two diseases. He exhibited calomel in scruple doses, and "the immediate results of the experiment went far beyond my most sanguine expectations." "In no case where the system was brought under the influence of calomel, and ptyalism induced, did a fatal termination ensue."

"The greater proportion of cases not requiring bleeding, the calomel was in general at once had recourse to, in the dose of a scruple, sometimes with the addition of a grain of opium, to be repeated every four or six hours, according to the urgency of the symptoms, and continued till ptyalism was produced. This effect, if it was to take place, was commonly produced in twenty-four or thirty hours, when the calomel was intermitted, and a dose of castor oil was ordered.

The immediate effect of the calomel seemed to be to produce a flow of bile into the intestines, and the stools, which before consisted of blood, mucus, pus, and shreds, now presented the appearance of bile, and were spinach-looking.

As soon as the bile was observed in the stools, an immediate abatement of the symptoms took place—the vomiting and tenesmus were relieved—the pain of abdomen and heat at the pit of the stomach were diminished—and the patient was considered out of danger."

Notwithstanding the large quantities of calomel that were often given, severe salivation did not occur in more than two or three instances.

---

## Pleuro-pneumonia?

An interesting case is related by Dr. Hamilton, of Falkirk, in the last number of our Northern contemporary, which we deem worthy of notice. Thos. Hansie, aged 50, a strong-looking, hale man, who reported that he had enjoyed good health for 20 years past, complained of an acute pain in the lumbar and hypogastric regions of the left side, with tightness of the chest, strong quick pulse, some cough, tough sputa. Subcrepitating râle was heard in the lower part of the chest on that side—the respiration tolerably good in the rest of the chest. This was in the middle of July. By the 5th of August, the symptoms were so far subdued by the usual antiphlogistic means, that medical attendance was not deemed any longer necessary. A small blister was recommended to be kept on the side for a few days. Exactly a month after this (6th Sept.) Dr. H. was summoned to the patient, and found him in a very altered condition. He had become emaciated, with anxious countenance, and prominency of the left side. On examination, the ribs were less distinctly visible on this side, and he complained of pain here, and a distinct feeling of airy crepitation could be felt with the hand in the subcutaneous cellular tissue, between the second and third ribs, near the sternum. Here was a tumor, about the size of half an egg, cut in the long diameter. When this was gently pressed, it conveyed the feeling of air, contained immediately beneath the skin; and, when a greater degree of pressure was employed, there was a feeling, as if the air passed through a fluid into the chest. The tumor did not immediately reappear when the pressure was removed. When the patient coughed, a strong impulse was sometimes conveyed to the hand through the tumor, similar to that felt, under similar circumstances, in hernia. A strong gurgling sound was heard through the stethoscope at this place, together with the metallic tinkling, during respiration. Over a large portion of the anterior part of this side, and except in the region of the heart, the same sounds were heard, but less strongly. The respiratory murmur was wanting in the whole of the left side, except faintly at the back part, near the spine. The sound, on percussion, was much duller in this side than natural. Catarrhal râles were heard slightly in the right side. The sputa were muco purulent, and sometimes considerable in quantity. He was ordered to be cupped, and to take calomel and opium. *Sept.* 15*th.* Has been recruiting much during the last week—appetite good—perspiration less—can lie on the right side—expectoration diminished—tumor has disappeared. Has some diarrhœa still—the calomel and opium to be continued. 17*th Sept.* The sound on percussion is much clearer than it was. *Gargouillement* can be heard with the stethoscope about the middle of the anterior of the left side. The respiration is cavernous on a level with the fourth rib anteriorly. Beneath the clavicle, and close to the sternum, there is *gargouillement.* From this time he continued to improve, and about the middle of November he was able to work. On the 27th November, Dr. H. had an opportunity of examining the patient. In the situation formerly occupied by the tumor, the skin felt more dense than natural, so that the rib could not be distinctly traced. The respiratory murmur was distinctly heard on the posterior part of the left side; but the sound, on percussion, was still duller than on the right side. The man was then strong, and worked as a porter. On the 25th April, 1834, the man continued in good health.

Different opinions were entertained as to the precise nature of the lesion in this case. For our own parts, we have no hesitation in coinciding with Dr Hamilton, that pleuro-pneumony was the first link in the chain—that sero-purulent effusion followed—that a communication took place with some of the bronchi—and that the matter very nearly made its way externally between the ribs. This, we believe, was the actual state of the case. The patient was fortunate to escape with his life.—EDS.

### CHOLERA.—DR. HAWTHORNE.*

The author of this pamphlet avers that "his mode of treatment differs from every other that has yet appeared before the public:"—and again, that he has administered his remedies "with unparalled, nay, with never-failing success." These being startling assertions applied to any disease, but particularly to cholera, we had curiosity to go through the brochure. We need not lay before the readers of this Journal any part of the history of the disease. Dr. H. thinks there are some reasons for believing that cholera is occasionally contagious; but still stronger ones for concluding that it is epidemic. In Belfast Dr. H. observed sporadic cases of intense malignity, long before the disease broke out generally—none of them appearing contagious.

---

* A Dissertation, &c. Octavo, sewed, pp. 53. Oct. 1834.

"The horrible epidemic at length came over the town like a shower, filling streets and lanes, in almost every quarter, with wailings and lamentations. The attacks, on the night of the 12th, and on the morning of the 13th of June, were simultaneous, and widely scattered over the town, without any apparent communication."

The symptoms of cholera are detailed with sufficient accuracy—and to the RATIO SYMPTOMATUM we do not object. In respect to the pathology, we agree with our author, that death is caused by the loss of the serous part of the blood, (where the patient dies in the collapse, or anterior to reaction)—in other words, that he dies of serous hæmorrhage—a doctrine which we have long maintained, and to which Dr. H. can lay no claim. The methodus medendi of our author will be found in the following extract:—

"In offering a few remarks on the treatment of cholera, it may tend to facilitate my object to give a list of the *formulæ* which I have been in the habit of prescribing, and which have proved so successful. They are as follow:—

### I. ANTISPASMODIC PILLS.

Camphor, half a drachm;
Opium, twelve grains;
Cayenne pepper, nine grains;
Spirits of wine, and conserve of roses, of each a sufficient quantity.—Mix.
To be made into a mass, and divided into twelve pills.

### II. ANTISPASMODIC MIXTURE.

Sulphuric ether,
Aromatic spirit of ammonia,
Camphorated spirits,
Tincture of opium, of each a drachm;
Cinnamon, or peppermint water, two ounces.—Mix.

### III. CORDIAL MIXTURE.

Brandy, or whiskey and cloves;
Ginger cordial, &c.

I shall first point out the steps to be pursued in the treatment of cholera, and then proceed to explain the *rationale* of the practice, and the *modus operandi* of the remedies.

I commence, therefore, with the malignant form of the disease.

The patient, on being seized with symptoms of cholera, should be immediately placed in bed in the horizontal posture. Should he be affected with watery purging, or serous purging and vomiting, a feeling of weakness, with a soft, feeble and variable pulse, and heat of skin below the natural temperature, he ought to get instantly six of the antispasmodic pills, and an ounce of the mixture already described. The medicine should be washed down with a dose of some cordial stimulant, such as a glass of ginger cordial, or of whiskey flavoured with cloves, or some such warm aromatic spice; or, if it should appear that the stomach would retain it, with a glass of whiskey or brandy punch, with essence of ginger in it. The punch to be made strong, and to be swallowed as hot as it can be let down. The body is then to be covered with additional blankets, and the usual means of communicating heat, such as jars or bottles of hot water, bags of roasted salt, or hot bricks, applied to the feet and different parts of the body, so as to restore the temperature, and to produce perspiration as quickly as possible. If one dose of the medicine shall be found insufficient to stop the discharges from the bowels, the half of the dose should be repeated, and, if necessary, an enema, composed of four ounces of boiled starch, with an aqueous solution of six grains of opium, or a drachm of laudanum, should be given and its return resisted till it has had time to produce the desired effect. I have frequently seen the aqueous solution of the opium retained after the spirituous tincture had been rejected. *So much for whiskey injections.* If profuse perspiration be quickly produced, it will be seldom necessary to repeat the dose of the medicine. Should one dose of it fail, however, to accomplish the object, more, I again repeat it, ought to be instantly given. There is no alternative. The escape of the serous, or watery part of the blood, must be stopped, or it will assuredly destroy the life of the patient.

When the discharges from the bowels cease—when the pulse becomes full and bounding, and the body is covered with a copious warm sweat, in ninety-nine cases out of a hundred all danger is over, and the individual may be well next day. The hotter the skin becomes when covered with sweat, the better; and, I would add, the less the danger. The great secret in the treatment of cholera is to lose no time in stopping the discharges, and in exciting warm perspiration. This object should still be kept in view by the practitioner, no matter in what state he may find his patient. After giving such a dose of medicine as may stop the purging, his next effort should be, by the external application of heat, to produce a discharge from the surface. If, when called in, the heat be higher than natural, the perspiration will equalise the temperature; if lower, the heat will restore it; and if the body be covered with a cold, clammy sweat, it will change it to a warm one. It is remarkable how suddenly the pain of stomach, præcordial oppression, headache and spasms, if they exist, are relieved on the breaking out of a free perspiration; and what is of equal, if not of greater importance, is, that the vomiting in every case immediately ceases. I would here remark, that heat can be much more efficiently communicated by solid substances, such as I have mentioned, than by the hot air, or vapour apparatus. I have long since left that instrument aside as worse than useless. I would also observe that, in the application of external heat, a rational use should be made of the means, and I cannot see any necessity for increasing the temperature beyond what is merely required to keep up profuse perspiration.

As little drink as possible should be given till the perspiration has flowed freely for a few minutes, after which the stomach will retain it. The patient should then be indulged with copious draughts of sweet or rennet whey, warm toast-water flavoured with ginger, mint or balm tea, or of any such mild beverage. The necessity of particularly attending to this shall be afterwards explained.

The sweating, if the patient can bear it, should be kept up for twelve hours, and may with advantage be continued moderately even longer. Its duration, however, must be regulated according to the strength of the patient and the state of the pulse. After the first four or six hours, more heat need not be applied than what is agreeable to the feelings of the patient.

If the purging has been quick and violent, the bowels should not be disturbed for at least twenty-four or thirty-six hours after it has been stopped. It would be well in such cases, provided the patient be free from sickness at stomach, to allow the bowels to remain unmoved till the second day; they may then be opened by a mild laxative enema. Should, however, the state of the stomach, at the end of twenty-four hours, appear to render it necessary, it may be administered. In case, as it often happens, the patient on the second day complains of acidity in the stomach, and the bowels be confined, it will be proper to give him two table spoonsful of the following mixture every third hour, till a laxative effect is produced.

Calcined magnesia, two drachms;
Peppermint water, eight ounces;
Sweet spirit of nitre, an ounce;
Compound spirit of lavender,
Tincture of ginger, of each 2 drachms;
Tincture of colombo, half an ounce.
—Mix.

This mixture will neutralize the acidity in the stomach, and restore the healthy tone of that organ. It will also act gently on the bowels, cleansing the tongue and cooling the system, and will promote the restoration of the healthy secretion of urine, which is generally suppressed in that disease. It is, besides, a valuable remedy in the consecutive fever which so often succeeds a severe attack of cholera. If, however, in addition to ascidity in the stomach, there be too great relaxation of bowels, the magnesia should be omitted, substituting aromatic spirit of ammonia, and camphorated julep, which, with the aromatics and bitters just prescribed, will remove the former without increasing the latter affection, and, if necessary, the tincture of opium may be added; or, if no pain, ten or twelve grains of the bi-carbonate of soda in a glass of water will answer the purpose.

The bilious vomiting, which so frequently occurs in the consecutive stages, may be relieved by a laxative enema. Bilious diarrhœa is to be treated with the cretaceous mixture, combined with suitable proportions of the tinctures of catechu and opium, and, if obstinate, by anodyne injections; the strength at the same time is to be supported with wine, chicken broth, and beef-tea. The healthy tone of the stomach should be restored by bitters and aromatics. As soon as the discharges from the bowels have resumed their natural appearance, the patient should be indulged with animal food—such as roasted beef, beef-steaks, or mutton-chops broiled. After the healthy functions of the body have been restored, the relaxation which has been produced by so much perspiration may be removed by sponging the body with vinegar, and rubbing with the flesh-brush or a coarse dry towel.

Great care should be taken not to allow the patient to get out of bed, or to stand in the erect posture, till the strength of the body and the healthy tone of the nervous system have been sufficiently restored. Fatal consequences have sometimes arisen from not attending to this precaution. In tbe Newtownlimavady Cholera Hospital, a woman, who had had a very favourable recovery from an attack of cholera, lost her life by imprudence in this respect. Contrary to the orders and remonstrances of the physician in attendance, she got out of bed, and while in the act of dressing herself in the erect posture, she suddenly fainted. The excretory vessels being unable to sustain the superincumbent weight of the fluids of the body, became dilated —the serum of the blood escaped into the bowels—the sphincter gave way, and she passed several quarts of fluid as clear as water. She was dead in two hours afterwards, having manifested all the symptoms of one who had been bled to death.

The milder forms of the disease are to be treated on exactly the same principle as the more malignant."

We believe our readers will be ready to remark that the principle of treatment laid down here is not so very different from any other hitherto recommended, as our author seems to think. There may not be any methodus medondi *precisely* similar in books; but the principle is familiar. The dose of opium prescribed by Dr. H. is much larger than that usually given. He remarks that, "the whole success of the treatment of cholera depends on the first dose. If the first dose be inefficient, the second may be too late."

We need not dwell on the consecutive fever. It must be treated on general principles. It is not of frequent occurrence, unless the patient has either gone into collapse, or approached very near to it. It is rarely met with unless there has been considerable purging—viz. serous hæmorrhage.

"My practice in cholera has not been in a corner. It has been considerable in six different counties in Ireland. In every part of the country where I have treated it, I have frankly explained to the medical gentlemen who co-operated with me, my views with regard both to the pathology and therapeutics of the disease, and every where, and at all times, the remedies I employed, and the doses of the medicines which I prescribed were open to the inspection of all."

The Appendix is chiefly occupied with criticisms on the modes of treatment adopted by others—and especially by his townsman, Dr. M'Cormack. These criticisms are conducted with great acrimony, and in exceeding bad taste. Several strong testimouials in favour of Dr. Hawthorne's mode of treatment are published in the Appendix. We shall insert one of them.

> "*Board Room, Dungannon,*
> 20*th Jan.* 1834.
>
> In consequence of recent discussions, in the public prints, on the subject of Cholera, the Board of Health feel called upon to state their decided approval of the mode of treatment of that disease, introduced here by Doctor Hawthorne; and, in confirmation thereof, give the annexed abstract of the number of cases treated, in and out of Hospital, on his plan.
>
> Signed by order,
>
> JOHN PEEBLES, Sec."

---

## FROTTEMENT OBSERVED IN PERITONITIS. Communicated by Professor BEATTY.

As any thing that can contribute to our means of discovering diseases of the heart, must be looked on as in the highest degree interesting to the practical physician, it has occurred to me, that a notice of some cases which have come under my observation, although not of disease of the heart, may serve to corroborate the views so ably set forward and maintained by Dr. W. Stokes, in his paper on the diagnosis of pericarditis, in the fourth volume of this Journal. It is there stated, that the opinion broached by Collin, in 1824, and which had gained no credence for nearly ten years, is founded in fact, and that we have a physical sign of inflammation of the serous lining of the percardium, viz. a "frottement,' or sensation of rubbing together of two uneven surfaces, distinguishable by the application of the hand, and by auscultation. The cases furnished by Dr. Stokes, in illustration of this point, are most interesting and instructive, and accompanied, as they are, by his judicious observations, must be considered as opening a new field in the departments of practical medicine and pathology. With a view to shew that similar effects are produced in the peritoneum, when that membrane is the subject of inflammation, I have been induced to forward the present communication.

In January 1832, a woman aged 30, was admitted into my ward for the diseases of females in the City of Dublin Hospital, labouring under dropsy of the left ovarium. The tumor filled the abdomen from the pubis to the ensiform cartilage, and was remarkably hard and unyielding. A few days after admission she was attacked with severe pain in the belly and febrile symptoms, which continued for a week, and required the abstraction of blood, and other antiphlogistic treatment, before she was relieved; during which time a remarkable sensation was cummunicated to the hand when applied over the umbilicus and its neighbourhood. The sensation was that of a grating or rubbing together of two uneven and rather dry surfaces, and was rendered most evident by ordering the patient to take a full inspiration, thereby causing the abdominal parietes to move more freely over the surface of the tumor. By the application of the stethoscope, a loud and distinct 'frottement' was audible, extending over a space of about five inches in diameter, with the umbilicus for a centre. In a few days, the pain and inflammatory symptoms subsided, under the treatment employed, and with them, the sensation just described, and the audible phenomena altogether disappeared.

In the December following, I had an opportunity of observing similar effects, in the case of a young lady, who was under my care for excessive enlargement of the spleen. The tumor occupied the left half of the abdomen, dipping down into the pelvis on that side, and its anterior edge passed the median line of the body, particularly at the lower part, where it extended considerably into the right side. She was seized with inflammation of the tumor, and during its continuance, phenomena precisely similar to those described in the last case were perceived; there was the same creaking sensation when either the hand or the stethoscope was applied to the surface, and this entirely subsided when the inflammation and pain were arrested.

It would appear that this method of diagnosis of disease of serous membranes is applicable only in those situations, where one, at least, of the opposed surfaces is adherent to a solid resisting body. I am not aware that phenomena such as have been mentioned can be perceived in inflammation of the peritoneum, under ordinary circumstances, where the soft pliable walls of the abdomen are in contact with the mass of intestines; but when a large solid tumor comes to occupy the cavity, as in the instances above mentioned, the case resembles that of the pericardium with the heart within it, and similar physical signs of disease of the serous surfaces become apparent.

It has appeared to me that these cases may be employed as confirming the truth and accuracy of the diagnosis of pericarditis, aud with that view I wish to record this brief notice of them."—*Dublin Journal*, *Sept.* 1834.

---

### Sir Charles Bell—the mighty Dead.

Homer and Virgil—Socrates and Cicero—the poets and the philosophers, of all ages and of every country, have eulogized the past, contemned the present, and bewailed the future! Yet the world has wagged on, and, in despite of these "laudatores temporis acti," many are so presumptuous as to think that improvements have taken place in most branches of science—nay, even in medicine. We have been led into some reflections on this subject by the perusal of some "lamentations," in the form of a clinical lecture, lately delivered by our talented and esteemed friend, Sir Charles Bell. He observes to his pupils, that *they* have not the advantages which *he* had—namely, of drawing information from a Black, a Monro, a Rutherford, a Gregory, a Cline, and an Abernethy. "We shall look around (says Sir Charles) in vain for such men."* The lecturer is led "to reflect upon the eminence of these men, and mentally to ask himself who are in their places now?" Sir Charles need not nave gone far to find at least one who is worthy to succeed them. He has himself thrown more light on many obscure parts of an occult science, than any one, two, or three of the mighty dead which he has enumerated. The lecturer goes on to remark, that his pupils "have not the example before them, of men having the same *sway* over the profession" as those above-mentioned. Now we sincerely rejoice at this, instead of looking on it as a sign of the decay of genius, intellect, and industry in modern times. The loss of this *sway*, which a very few exercised over the multitude of our profession, in days of yore, is owing to two causes—a more wide and a more *equal* diffusion of knowledge among the members of it. We say a more *equal* diffusion; for knowledge may be very widely diffused, but very unequally. Under existing circumstances, therefore, it is morally impossible for a *few* to outstrip the *many*, as in former times, when medical education was extremely imperfect in kind, as well as defective in quantity. The Blacks, the Monros, the Gregorys, the Clines, and the Abernethys, shone in their times like stars of the first magnitude, or like moons among the twinkling luminaries of the night—

> ———————velut inter ignes
> Luna minores.

But we confidently aver that, were these mighty dead to experience a second incarnation, and run their course on earth again, they would not descend to posterity as THE Blacks, Gregorys, Abernethys, &c. of former days. No, verily. Nature is too economical to elaborate a dozen of Shakespeares Miltons, and Byrons at the same time. The medical luminaries already alluded to owed their celebrity to accidental circumstances, and the then state of medical society, rather than to any towering intellect, rising high above the capacities of their descendants of the present day. But we will go much farther than this. We fearlessly assert, that the living surgeons of our own æra, including Sir Charles amongst the foremost, are infinitely *superior* to any and all of those which he has brought forward on the tapis. We do not say that they are superior by *nature*—but by the improvements of time. With the exception of a few rare examples of preternatural genius, exhibited once or twice in a century, we believe that Nature gives birth to an average of talent, in the great mass of society, *every year*. It is opportunity and industry that make the great differences in mental and experimental acquirements. Not that we think all men equal in point of natural capacity. On the contrary, there are hardly two men, in a large number, of equal calibre. But we maintain that the average ratio of talent is as great in the nineteenth as in the eighteenth, or in any preceding century; and that it is owing to the greater equilibrium of education now than formerly, that we have fewer prominent characters amongst us. We confidently predict that, as time rolls on, as education becomes still more diffused, and as the "stimulus of necessity" augments with the increase of population, this elevation of the few over the many will become less and less conspicuous. And it will be all the better for society at large. We shall have Coopers, and Brodies, and Keates, and Bells in our towns and villages—and many an expensive journey to the metropolis, for advice, will be saved in the twentieth century.

---

* Med. Gaz. 18th Oct. 1834, p. 90.

Sir Charles passes over LECTURERS in a parenthesis, and then makes a desperate lunge at *young authors*, of modern times. We may be supposed to have some knowledge of this subject; and we have no hesitation in asserting, that more trash issues from the pens of old than of young authors in the present century. Look at the far-famed prelections of the far-famed Abernethy —and ask yourself, Sir Charles, what is their use? If you speak the sentiments of your heart, you will say that they are as good as the "Arabian nights" for dispelling melancholy, and making us laugh in a dull Winter's evening—when we have taken no fees in the morning, and have been called to no patients during the day.

We are sorry to be obliged to differ, toto cœlo, from our estimable clinical lecturer, when he tells his pupils that they have not the example before them of men who have "as sedulously given themselves up to the improvement of the profession," as those of his day.

We firmly believe, and as fearlessly maintain, that in no period of the Christian æra, was there more strenuous, or more successful application to useful and practical science, in medicine and all its collateral branches, than in our own times. We do not indeed, addle our brains so much as our forefathers did, in the construction of theories; but we have far outstripped them in morbid anatomy—in diagnosis—in chemistry—in accurate clinical observation—in therapeutics—in operative surgery—in short, in every branch of practical and scientific medicine. In all these advances, Sir Charles Bell has stood in the foremost ranks—and his remarks, if serious, are little short of suicide, as respects himself, and fratricide, as regards his contemporaries.

---

## OBSERVATIONS ON ERYSIPELAS. By EPHRAIM M'DOWEL, M.D. one of the Surgeons to the Richmond Hospital.

This forms the leading article of our Dublin contemporary for October last. It appears that the disease was epidemic in the Dublin hospitals in the beginning of 1834, and very frequently fatal. It attacked all ages and both sexes indiscriminately—the sick and the healthy—while almost every kind of injury was followed by the disease. It occurred after leeching and bleeding, venereal ulcers, and even the application of liniments to the surface. Surgical operations were so generally succeeded by erysipelas, that they were performed as seldom as possible. Like the epidemic influenza, it was characterized by extreme prostration of strength, rendering depletion precarious, and often dangerous, even where there was strong local inflammation, and the constitution was sound. In the progress of the epidemic, there was great variety in the numbers attacked at different periods. Sometimes it would be nearly extinct in the hospital, and then unexpectedly burst forth with renewed force. It was most troublesome in Easterly winds.

"The different cases of this disease met with by the writer, were referrible to one of three classes. In the first, occurring in healthy persons, and usually after injuries, there was much local and constitutional disturbance; the disease was often of the phlegmonoid form, but in other cases, the skin alone was acutely attacked. In the second class of cases, examples of superficial erysipelas, the redness was more diffused, frequently it was not very perceptible, and occasionally considerable patches of the skin were unaffected, passed over, as it were, by the disease; vesications occurred more frequently than in the more acute cases: this form attacked persons of weak constitution, or of unhealthy habits, in whom the biliary organs and stomach were deranged or diseased: the constitutional symptoms seldom ran high. Subcutaneous abscesses formed very insidiously, and frequently in considerable numbers, and, if not opened early, spread very quickly, death of the cellular membrane to a varied extent generally occurred, undermining the skin, and protracting much the cure. It was often necessary to examine a limb most carefully to detect these purulent depôts, the patient seldom being aware of their existence; the matter secreted was generally healthy pus. In one case of erysipelas of the head and face, succeeding ptyalism, slight pain, or rather uneasiness, had been complained of in the neck; there was no evidence of disease, but on examination after death, a very extensive *puriform* infiltration of the loose cellular tissue, about the trachea, thyroid body, and œsophagus, was found; it extended behind the pharynx nearly to the base of the cranium, and very probably was not merely an example of inflammation propagated from the skin, but also from the mucous membrane of the pharynx, which was also inflamed. In the diffused inflammation of the fauces in cynanche maligna, we have frequently similar formations of matter deep in the neck, from extension of diease from the mucous to the cellular tissue. In the third class of cases, the disease occurred in habits broken down by want, intemperance, age, or previous organic disease of long standing, and sinking occurred very early, unless prevented by stimulants. In such cases, there was less redness and heat of surface, the affection had more of the character of erythema, with a well defined and raised irregular border; the pulse was quick and weak, the accompanying fever of the typhoid character, the tongue more or less loaded, dry and brown, or red, dry and scabrous near the apex, with elongated papillæ, the rest of its surface much loaded: this latter condition of the tongue generally indicated more or less of gastric irritation.

It is in this form of the disease, that on examination after death, we constantly find evidence of the previous existence of inflammation of the cerebral membranes, of the pulmonary, and of the intestinal mucous surfaces, the cutaneous affection being in fact but a small part of the disease. Severe rigors and diffuse inflammation of the throat, of a dusky red colour, with patchy deposition of lymph, and more or less of sloughing, as in cynanche maligna, preceded several severe cases of erysipelas of the head and face. When the scalp was attacked the inflammation generally became diffused, but occasionally, was limited pretty exactly to one half; when this got well, it was usual for the opposite side to become affected. Delitescence, or disappearing of the inflammation from one part to re-appear in another, was of frequent occurrence. There was a great tendency to the erratic form, particularly in the old, or in persons of broken-down constitution."

An attack of erysipelas was sometimes beneficial in chronic and obstinate cutaneous diseases, as lupus. When the epidemic was very prevalent, there was a remarkable tendency to diffuse inflammation of the digestive tube, without any accompanying erysipelas of the skin. The disease was then rapid—the prostration great. Dr. M'D. lost two patients in this way. The first patient was attacked with diarrhœa on the 4th of March, and died on the 12th, having exhibited tenderness on pressure of the abdomen, bloody stools, with mucus, &c. On examination, there was found diffuse erysipelatous redness of the mucous membrane of the stomach and bowels throughout—the redness being most intense near the termination of the ileon, where shreds of coagulable lymph were thrown out, abrasions and ulcers being also apparent.

Some practitioners, says our author, doubt or deny the existence of morbid appearances after death by erysipelas. He is not one of these. The fatal cases are generally those where the head and face have been effected, and where the last scene is characterized by coma. In these, he usually found much sanguineous congestion in the different tissues, from the skin to the brain—serous infiltration of the loose cellular substance under the scalp, and sometimes sero-purulent fluid—pericranium vascular and thickened—dura mater vascular—arachnoid sac containing a serous fluid—white or milky appearance of this membrane between the convolutions of the brain, with abundant sub-arachoid effusion into the cellular tissue of the pia mater—sinuses, cerebral veins, jugulars, and right side of the heart much congested—cerebral substance firmer or softer than natural, shewing numerous bloody dots.

In most cases of protracted erysipelas, inflammation of different portions of the gastro-pulmonary mucous membranes was found—especially of the stomach, bowels, and bronchiæ—the inflammation being most intense at the bifurcation of the trachea, with frothy, sanguineous effusion into the smaller ramifications. Gastritis was indicated by epigastric tenderness, vomiting, ardent thirst, loaded tongue, dry, red, and scabrous near the apex—rapid pulse, &c. the strength being very variable. Muco-enteritis was known by abdominal tenderness, of variable extent—tympanitic distention, diarrhœa, the pulse often but little disturbed, and the alvine discharges being mucous and gellatinous, with blood occasionally. When the disease spread to the large intestines, there were dysenteric symptoms.

Metastasis of erysipelas is of rare occurrence, but may take place. The author gives a case where erysipelas of the face suddenly disappeared, and was instantly succeeded by acute bronchitis, which quickly destroyed life. We have seen some instances of this kind; but more where the external erysipelas suddenly extends to the membranes of the brain, without entirely leaving its original seat in the skin of the face or head.

Our author could not see any proofs of contagion in the present epidemic erysipelas; but, from what he had seen in other years, he has no doubt that it is occasionally contagious, both in and out of hospitals. A letter from Dr. Brereton to the author corroborates this opinion, by his experience in the temporary fever and dysentery hospital. We think that few hospital surgeons or physicians can doubt the occasional contagiousness of erysipelas.

"The treatment adopted in the first class of cases, was general or local bleeding, frequently both were employed; incisions were made when there was much tension, heat, and throbbing: calomel, followed by some of the neutral salts, when the stomach was irritable, purgative enemata, and saline effervescing draughts. If the disease did not yield, and that symptoms of inflammation of the internal organs manifested themselves, calomel in doses of two or three grains, combined with small doses of opium, was exhibited every fourth or sixth hour, until the mouth was decidedly affected: and cases threatening a fatal termination, when once ptyalism was effected speedily ended satisfactorily. The mercurial affection of the mouth was in general easily controlled by a gargle of the solution of the chloride of lime or soda, with syrup and water; or by the free application of a lotion of nitrate of silver, twenty or thirty grains to the ounce. The vomiting (although in general sympathetic, in some cases obviously depended upon gastritis) was combated by leeching and blistering the epigastrium, and by the exhibition of calomel and opium, with abstinence from all food; drink in sips merely was allowed.

In traumautic erysipelas, emollient poultices and fomentations were employed; some were successfully treated with cloths dipped in cold water, and frequently renewed, or covered over with oiled silk to prevent evaporation: if the inflammation spread, nitrate of silver, in solution, or blisters were employed to arrest or extinguish it. In the second class of cases, general bleeding was inadmissible; leeches, blistering, or the nitrate of silver lotion were generally found sufficient to check the spreading inflammation. Internally, saline purgatives, with small doses of tartarized antimony, or, if the stomach was irritable, blue-pill, followed by saline aperients, and afterwards quinine in small doses, was employed; whenever lesion of the vital organs was threatened, mercury was steadily given to affect the system, at the same time supporting the strength by tonics and stimulants. In the third class of cases, it was necessary to prevent sinking by the early and liberal use of wine or porter, beef-tea, quinine, carbonate of ammonia, and opium; the latter was often necessary to check diarrhœa, but was contra-indicated when there was much cerebral or pulmonary congestion; it was then necessary to excite powerful and extensive counter-irritation, and to stimulate by sinapisms or blisters."

In respect to the local treatment of phlegmonoid erysipelas, every practical surgeon is now aware of the importance of early and free incisions, which speedily arrest the progress of the inflammation, give great relief to the patient, and prevent the sloughing of the fibrous and other tissues, as well as purulent infiltration of the cellular membrane. Puncturing is a bad substitute for incision, and the depth should be in proportion to the extent to which the inflammation has penetrated. In the great majority of cases, it will be unnecessary to go deeper than the cellular membrane. The bleeding is generally profuse, and should be watched, especially in people of intemperate habits or broken-down constitutions. "When (says our author) we observe the rapidity with which the blood flows, it appears pretty evident that there is no stagnation of blood in the inflamed capillaries." To us it appears just the reverse. The greater the engorgement and stagnation, the more rapid the efflux from the vessels when a channel is opened. "Qua data porta ruit"—like pent-up winds in the Eolian mountains. Where the disease has been neglected till sloughing occurs, lint, dipped in spirits of turpentine, or in gum elemi and turpentine, should be applied to the incisions, and the whole covered with an emollient poultice.

"Other local applications will also be found of much service in expediting the separation of sloughs and the processes of reparation, as equal parts of castor oil and balsam of capivi, the Peruvian balsam, or one part of the solution of the chloride of lime or of soda to six or eight parts of water."

When acute erysipelas is limited to the skin, our author recommends leeches. Dupuytren employs blisters. It is often necessary to exhibit tonics to support the strength, and rouse the depressed vital powers. Blisters have been employed with much benefit by our author.

"The local application of nitrate of silver, either in substance or in strong solution, so strongly recommended by Mr. Higginbotham, and by others, has been fully tried by the writer in very many cases. It should be applied not only to the inflamed parts, but also to the neighbouring integuments; it should produce vesication, or it is of little service; the smarting from the application lasts but a short time, and is soon followed by decided relief. On the next day, there is generally much diminution of the swelling, the blackened cuticle is much wrinkled, and desquamates in a few days; it aggravates the symptoms in phlegmonoid erysipelas, and also occasionally in the superficial form in very irritable habits. Some prefer this application to blisters, which, however, will often be found to succeed when the former has failed. Many object to these plans of treatment, but every practical man must be aware of the urgent necessity of arresting the progress of erysipelas, particularly when it affects the head and face, as an inflammatory state of the brain and its envelopes, accompanied by delirium, and ending in coma, may occur very early if the erysipelas becomes extended.

Lately, I have tried the plan of mercurial inunction, as recommended in the Lancet of July 14th, 1832, page 480, and of September, page 739, and upon the whole am led to consider that it is a most valuable application in this disease. To ascertain as much as was possible the value of this mode of treatment it has been employed nearly to the exclusion of other remedies, the bowels being merely regulated, and the diet attended to. In two cases where there was much sinking, tonics and stimulants were combined; in most of the cases, mercury applied in this manner affected the mouth. Understanding that this plan had been used in Mercer's Hospital, I applied to Mr. Reid for information, and was favoured with the following communication:—

'*York-street*, *Thursday*,
*June* 19*th*, 1834.

I lose no time in giving you, from memory, the experience I have of the treatment of erysipelas by mercurial inunction in Mercer's Hospital. I have witnessed the practice both in the idiopathic form, and in the erysipelas consequent to wounds, &c.; it has been used in both species in the head, and also where the extremities have been the seat of the complaint. I think it is more than two years since this practice was introduced amongst us, and was suggested by the cases related in the periodicals, of its success in the hospitals of Paris. It certainly would appear to me, from a number of instances, to have considerable power in limiting the extent, and generally checking the progress of the disorder; two, three or four applications have usually sufficed, but the indications of medical treatment have been at the same time followed up. It has been remarked, that no case with us has died, on whom the practice was tried, and that if not in all, in the greatest number of instances, the patients were salivated: from this it would appear, that the absorbents in the diseased surfaces possessed an increased activity. We have now the case of an old man treated by inunction, admitted last Sunday; the erysipelas has disappeared, and the mercurial affection of the mouth is the principal cause of his present illness. This was a very unfavourable case; he received a contused scratch on the forehead a few days prior to admission; the face, scalp, ears, throat, and neck were much tumefied on his admission, and the right arm, from the wrist to above the elbow, similarly affected, though there was no local injury of the limb.'

Many cases are detailed, illustrating the varieties of erysipelas mentioned in this paper; but these we need not analyze. The whole paper is exceedingly creditable to Dr. M'Dowel—and to Dublin surgery in general.

---

### GASTRIC NEURALGIA.

A very distressing case of this kind lately came to our knowledge, which cannot fail to be interesting to many of our readers. A gentleman of high intellectual attainments, and one of the most successful authors of the day, had suffered most severely, for nine months, with an agonizing pain in the region of the stomach, which came on every day at breakfast time, whatever he ate, or whether he took food or not—and continued without intermission, but accompanied by the most distressing flatulence, till he had finished his dinner and taken a bottle of wine. It then ceased, and he was perfectly well, and in good spirits, the whole of the evening. He also slept soundly, except when kept awake by an anticipation of the pains which he was to undergo the next morning. The nature of the food made no difference; nor did an alteration of the hour of dining alter the period of the gastralgia. If he dined at his long-accustomed hour—six o'clock, and took a bottle of port-wine, his temporary security against the enemy was certain. An anticipation of the dinner-hour did not bring with it the relief expected. It may well be supposed, that a gentleman in his rank of life had had the best advice, and tried a variety of remedies. He resided in the country, and had never been our patient. He wrote a most pathetic letter, describing his sufferings, and imploring for the sake of humanity, that we would suggest something for his relief. We prescribed the following:—

(*No.* 1—*Aperient.*)
℞. Decoct. aloes c. ℥iv.
Carb. sodæ, ʒj.
Carb. ammoniæ, ℈j.
Tinct. sennæ c.
Tinct. rhei comp. āā ℥ss.
Vini colchici, ʒij.

Misce fiat mistura, cujus capiat coch. ij. mag. primo mane, cum pauxillo aquæ tepidæ, et repr. dosis omni horâ donec alvus plene respondiat.

After the operation of the aperient, he was desired to take a table-spoonful of the following mixture every hour, till the pain ceased, or until the bottle was finished.

(*No.* 2—*Anodyne.*)
℞. Confect. aromat. ʒij.
Carb. ammon. ʒss.
Tinct. card. comp. ℥ss.
Liq. opii sed. ʒj.
Aquæ cinnamon. ℥iij. Misce. ut supra capienda.

We did not deem it prudent to alter his diet, as regimen seemed to have no influence on the complaint. We desired him, however, to change port-wine for brandy and water. We heard nothing from him for three weeks or more, when we received a letter, containing the following report.

"—— *Park, Nov.* 10*th*, 1834.
Dear Sir,—I ought long ago to have thanked you for your prompt and skilful attention to my distressing case; but waited till I could speak with certainty as to the success of your prescriptions. I have the pleasure to say that I am completely, or very nearly so, relieved from the flatulence, which was more difficult to bear than the pain. This relief I mainly attribute to your *warm aperient*, which I have taken every morning. I had got some temporary ease from the paroxysms of pain I described by a strong dose of morphium and strychnine, before your prescriptions arrived. It kept me dosing and sick for nearly 48 hours. I then took your aperient medicine, and it has been so effectual, that I am nearly myself again —certainly a very different creature from what I was three weeks ago. I have changed my port-wine for brandy and water, and enjoy my breakfast once more. I have not had occasion to take the anodyne marked No. 2 at all. I shall soon be in town to thank you in person for the great benefit I have derived from your able assistance."

The relief above described may or may not be permanent; but, even if temporary, it is of no small advantage. We desired him to strike out the colchicum, and persevere with the warm aperient. The gentleman is nearly 70 years of age, and of a very florid complexion, and, we believe, of gouty diathesis. We had never seen him but once, and that more than eighteen months previously to his application to us—when, in consequence of some official duties which we had to perform, this gentleman was somewhat incensed against us. This gastralgia was of a remarkable character, and we think it was occasioned partly by flatus and partly by some acrid secretion in the stomach itself. The regular periodicity of the attack, however, and the relief experienced by dinner and a bottle of wine, shew that the nerves were deeply implicated. Should we learn any more of this curious case, we shall state it to our readers.

### CREPITATIO MUSCULORUM.

In our last number, (October, 1834,) page, 452, we mentioned a curious case of loss of power in one of the lower extremities, with a remarkable and loud cracking of the muscles, when the limb was put in motion. We mentioned that we had recommended the patient, Lady W——, to make a tour on the Continent, more with the view of diverting her ladyship's mind, and improving her general health, than with much hope of restoration of power to the nearly paralyzed limb. She travelled through Holland—ascended the Rhine—visited the Brunnens, but did not bathe—made a tour through some parts of Germany, and also in Switzerland—returning by Belgium, and reaching London, after an excursion of eleven weeks. We preceded the patient in the same track, but having crossed the Alps into Italy, we did not happen to fall in with the party, or learn the result of the tour till recently. On calling at her Ladyship's residence, we were not a little surprised and gratified to find her walking about the drawing-room, without crutches—and almost free from lameness! We learnt that the power of the limb gradually returned as she pursued her journey, and indeed had been nearly restored before she reached the Brunnens—consequently she wisely travelled on, and recovered the use of her legs. We were now anxious to ascertain whether the crepitatio musculorum remained—and we found that it had nearly disappeared, but was now as loud as ever. Since we published the account, a medical friend called on us, and stated that he had the same crepitation in the muscles seated on the back of his neck. This we ascertained to be the case by applying the stethoscope. But the cracking is not near so loud in the case of the gentleman as in that of the lady. We have observed that this crepitatio musculorum is noticed by one of the Dublin lecturers (but his name has escaped us) as sometimes occurring in chronic rheumatism. The astonishing benefit, however, which has resulted from travelling exercise, and that in such an unpromising case as Lady W.'s, deserves record, as it may lead to other trials in similar circumstances.

---

### PLURALITY OF ASSISTANTS IN HOSPITALS.

This subject has lately given rise to some long and rather angry discussions at St. George's Hospital. Having heard that a strong opposition to the appointment of a second assistant-surgeon would be raised, we were not a little curious to learn the arguments on which such an opposition would be grounded. We therefore took the trouble to attend one of the Board-meetings, convened on that account, and must confess that we were far more surprised than edified by the ratiocination employed by the opponents of a measure which promised so much public utility. We expected that the arguments of the opposition would be based on some principle, and that no allusion would be made to any private or personal advantages or disadvantages acccruing from the measure. Both lines of argument were adopted, however, on the occasion—That which rested on principle (if principle it could be called) was futile, and very often unintelligible—that which based itself on personal reasons was somewhat injudiciously urged—especially when it proceeded from the individual personally interested. This part of the subject, however, we shall dismiss. In respect to the policy of enlarging the sphere of the surgical assistancy by the appointment of two, instead of one assistant, we admit that the opponents of the measure laboured under the greatest disadvantages, inasmuch as no human ingenuity could devise anything like a rational objection to such a liberal and useful procedure. The only fault, indeed, which we find with the additional appointment is, that it is still too restricted. Instead of having a narrow crevice or loop-hole to such an institution, just large enough to admit a single individual, we would throw open a portly entrance, through which two assistants might enter, leaving an open stage and no favour for their professional exertions. Of all monopolies, that of a single assistancy to a public hospital is the worst. It shuts the door against merit—it prevents competition—and goes as far as it can to extinguish all energy and emulation in the monopolizing individual. ONE ASSISTANT SURGEON to such a noble pile as St. George's Hospital!! What would be thought of the man who convened a meeting of the inhabitants of Piccadilly, and, in a laboured speech, informed them that as there was one highly respectable surgeon-apothecary in the street, who was quite able and willing to physic all Piccadilly, long as it was, it would therefore be very beneficial to the said street and its inhabitants if they came to a resolution to have no other doctor there than the one in question? The proposer of such a measure would be considered crazy; and yet the adoption of his proposal would not be half so absurd, and not one quarter so injurious as the resolution, if adopted, of having but one assistant-surgeon to St. George's Hospital. The mal-contents of Piccadilly, when sick, might send to Clarges Street, Half-moon Street, or Curzon Street, for medical assistance, if they preferred a private to a parish doctor; but not so the inmates of the hospital. Whether the monopolizing assistants were idle, or ill, or ignorant—THEY had no choice! and when a vacancy for a higher grade occurred, we all know that the said assistant would, in ninety-nine cases out of the hundred, be the successful candidate.

One of the arguments against an additional assistant-surgeon, and which was adduced by the existing assistant, surprised us much—and, we have no doubt, astonished many of the auditors. It was maintained that such an appointment would injure him personally, and deprive him of half his reputation! Let us analyze this argument a little. If this personal injury should accrue, it could only be in one of two ways. He could only lose half his reputation by the superior ability *or* superior assiduity of his junior coadjutor. We venture to say, that the senior assistant of St. George's Hospital entertains no fear of being eclipsed, in respect of talent, by any assistant that may be elected to that institution. The other source of personal danger must lie in the superior industry of his junior collaborateur. Now, if the present assistant-surgeon permits himself to be outstripped by his junior in his labours to promote the utility and raise the character of the hospital, as well as of surgical science in general, we can only say that he deserves to lose—not half, but the whole of his reputation. Knowing, then, as we do, that nothing good, or great, or useful ever flowed from monopoly, that extinguisher of industry and moth of talent, we hail every competition in our public establishments as the forerunner and efficient cause of increased personal energy and augmented public good. In this paramount point of view, the new appointment at St. George's Hospital will be as beneficial to Mr. Walker as to his coadjutor or to the institution itself. He may be possessed of ample talent—but he shares the lot of mankind in ONE danger—that of idleness, if too secure in the prospect before him, and without the stimulus of emulation in his rear. We congratulate him, then, on the very event which he seems to deplore as a calamity.

We reiterate our opinion that every hospital, at all approaching the size of St. George's, should have at least two assistants to each department. It is idle to say, that the work may be done by one. It will be far better done by two—besides the advantage of encouraging and training a greater number of young men for the service of the institution and of the community at large.

An instance, indeed, was related by Sir Benjamin Brodie, of an assistant-physician at St. George's Hospital being passed over, on account of incompetency—or supposed incompetency to fill the place of a physician. But it is clear that the incompetency must be of the most glaring kind to induce governors to reject the only assistant in the hospital, and seek for a physician or surgeon out of doors. Such a stigma would be professional [illegible] assistant; but if there were two, the selection of a junior might be made with less injury to the one that was passed over for the time.

Again, we venture to draw the attention of the governors of the institution to the state of the out-patients. Scarcely a week passes that we are not mortified and chagrined at seeing patients rejected for want of room, and whose complaints require daily attention. Often are we induced to prescribe for and tend these poor people at their homes, when we can ill spare time from other, and certainly more lucrative avocations. Here would be an ample and fertile field of professional improvement; and we think that some plan by which the out-patient might be better provided with attendance, would greatly augment the number of subscribers to the hospital, since many are weekly disappointed by the rejection of those to whom they give tickets of admission. Pupils should never visit or have the charge of out-patients, except under the superintendence of some person of responsibility.

P.S. Since the above was written, we see that, by a great majority of governors, the principle of two assistant-surgeons has been recognized and approved, and an additional assistant accordingly appointed. We hope that an additional assistant-physician will soon follow.

---

## ANATOMICO-PATHOLOGICAL RESEARCHES ON THE PNEUMO-GASTRIC NERVE. By J. T. H. ALBERS, of Bonn. WITH OBSERVATIONS ON DISEASES OF THAT NERVE. By Dr. HANKEL.

The state of integrity or disease of the pneumo-gastric nerve has, by reason of the important functions it presides over, attracted much of the attention of the more modern pathologists. In all the post-mortem examinations that came before him for nine years, Dr. Albers has never omitted to take notice of the state of this nerve. In the treatise before us, he mentions only those diseases in which the nerve had been most frequently involved.

In the autopsies of forty-seven persons who died of hooping-cough (some in the second, but most in the first stage of the disease), he examined both pneumo-gastric nerves in each subject, from their origin to the diaphragm. In forty-three there was no change in volume, colour, or consistence. Of the four others, who were scrofulous and lymphatic, the nerve of the left side was found in one slightly red, and that of the right side of the same colour in the three others. This redness was similar to that of the par vagum, in subjects victims to typhus fever, and was always on the side on which the patient commonly lay.

In seven cases of dothinenterite, the right pneumo-gastric was found red in two instances, the left once. This redness affected rather the tissue of the neurilema than the capillaries of the nerve. It disappeared by leaving the nerve some hours in cold water.

In the case of a robust man, æt. 27, who had been attacked in July with dyspnœa, anxiety, delirium, tetanus, and death, in the course of twelve hours, there was nothing presented itself at the dissection but redness and softening of the cervical portion of the pneumo-gastric nerve. It did not lose its colour by immersion in cold water, but by exceedingly slow degrees, and then was of a yellowish white. No doubt the colour and congestion may be produced on the dead body, by keeping the neck down and the head up, but in such a case the colour will be removed by cold water, and the nerve regain its original hue; but this did not occur in the case just quoted.

In fifteen subjects who died of tubercular phthisis, the par vagum was found developed in a remarkable manner; the right was much larger than the left, and in a more palpable degree than is found in the healthy state. This development of the nerve in phthisis is not rare; it has been observed by Swan and Descot.

In two cases of cancer of the æsophagus, the recurrent nerve was entirely destroyed by suppuration; in another case of perforation of the trachea and œsophagus, the vagus was partially destroyed, as was the recurrent.

In a case of medullary cancer of the mediastinum compressing the trachea and œsophagus, the nerve was developed so as to form a little tumor. The cancerous tumor surrounded the nerve. On cutting into its neurilema, there was found a tumor containing a substance similar to the cancerous one.

In a patient who died of intermittent croup, there were found tubercles in the left lung, tuberculous development of the cervical and bronchial ganglions, and intimate union of the pneumo-gastric of the right side with these ganglions. From these facts, Dr. Hankel attributes the attack of croup to the irritation produced by the softening of these glands, and the death of the patient to the paralysis of the pneumogastric nerve. He is also of opinion that many chronic affections of the chest are owing to organic alterations, tumors, &c. which compress and irritate the par vagum; and that if we find disease in the lung, we too often carelessly omit the minute examination of this nerve.

M. Andral relates a case, in the Nouvelle Bibliotheque, remarkable for its anatomical alterations. The patient was a young man of 24 years old, presenting the following symptoms: swollen countenance; œdema of the eyelids, and lower extremities; respiration short, confined, and depending so much on the pectoral muscles, that the lungs seemed paralyzed; inability to remain in the horizontal position: lips and alæ nasi blue; the stethoscope indicated no disease of the heart. Death succeeded suddenly to a fit of dyspnœa. On examination after death, a portion of the par vagum was found enveloped in tuberculous glands, below which the substance of the nerve was in a state of cartilaginous induration.*

---

* Dublin Journal, Nov. 1834.

---

## REMARKS ON TUBERCULAR PHTHISIS WITH SYMPTOMS OF OBSTRUCTED CIRCULATION. BY R. POOLE, Esq. Assistant-Surgeon, 32d Regt.

[Dublin Journal, Nov. 1834.]

The perusal of this paper brought to our minds many mortifying recollections of false prognoses delivered, even in a very late period of our professional career, respecting affections of the chest. Frequently have we come to the conclusion that our patients laboured under cardiac disease, when dissection proved that it was disease of the lungs. We have often thought that the "CONFESSIONS" of a medical practitioner, who had arrived at mature age and extensive practice, would form one of the most interesting volumes ever offered to the public. By "CONFESSIONS," we mean a candid acknowledgment of errors committed, and false opinions formed. We despair, however, of finding a Rousseau in Physic. Few have courage to acknowledge all the mistakes which they have made, either in diagnosis or practice, and thus thousands of rocks and shoals are left unmarked by flag or buoy, to wreck the unsuspecting voyager.

Two cases are detailed by Mr. Poole, in which the usual phenomena of tubercular phthisis were either obscure, or masked by symptoms of cardiac disease. In the first case, the predominant features were, dyspnœa, palpitation, puffy countenance, some cough, muco-purulent expectoration, bulimial appetite. On examination after death, the heart was found enlarged, and the whole of the *left* lung, as well as the two upper lobes of the right lung, were found completely infiltrated with tubercular matter. There were one or two excavations in the summits of both. There was passive dilatation of the right ventricle of the heart—the left chamber slightly hypertrofied.

The second case is far more minutely detailed, as it was constantly under Mr. Poole's care. The patient came into hospital, in November, 1833, with symptoms of inflammatory fever. He was remarkable for the purplish colour of the cheeks and lips. He went through a course of mild fever, characterized by a remarkable tendency to asphyxia, as well as lethargy. He was convalescent by the middle cf December, and allowed to leave the hospital. On the 22d January, 1834, he was again admitted. His face was much flushed and very turgid—great anxiety—full hard pulse—hurried respiration—dry cough—no decubitus difficilis—acute pain over the whole chest on pressure. There was dulness on percussion, in the left submammary region, the rest of the chest sounding clear—respiratory murmur clear and distinct throughout both lungs—considerable impulsion of the heart, attended with and *bruit de soufflet*. Nearly 50 ozs. of blood were taken from the arm, and three quarters of a grain of acetate of morphine administered. He slept profoundly that night, and in a few days he was so far recovered as to leave the hospital again. On the 7th February he was readmitted, with pains of trunk and extremities and cough. He recovered and was discharged on the 15th. He did well till the 15th March, when he was once more admitted, suffering from slight pains of shoulders and chest and some expectoration. On the 17th he presented the livid complexion—circulation slightly accelerated—pain in the left breast and shoulder—considerable cough—little or no loss of flesh. On the 19th he complained of much pain in the epigastrium and abdomen generally, which is slightly tumid—left cheek very livid—pulse 100—cough and expectoration diminished. The reports are carried on from day to day, with great minuteness, so that we cannot follow them. The symptoms were often anomalous and puzzling, we admit; but we confess that we should have entertained little or no doubt that a disorganizing process was going forward in the lungs. We shall just quote one day's report, as an example.

"26th March. Passed another bad night, muttering to himself, and otherwise irrational; vomited some last night and this morning after drinking same barley-water; says he is better this morning; his appetite is less voracious; breathing much more rapid; pulse very small and soft, still upwards of 100; a good deal of cough; expectoration still copious; the right hand has become livid; decubitus chiefly on the left side, but he can lie on his back; is unable even to turn on the right without producing cough, and increased dyspnœa; heat moderate; right side less defective in resonance, but the respiratory murmur here is still obscure; along the spinal edge of the scapula, on this side, a fine mucous or subcrepitating rale attends the respiratory murmur; left side affords a dull sound on percussion only at the cardiac regions; the whole being at this side, except a small portion at its summit, affords also a distinct subcrepitating rale; impulse of heart very inconsiderable; sounds much diffused."

He died on the 6th of April, and the chest presented the following lesions.

"The lungs did not collapse on the chest being opened. The anterior fringes of the right, and the anterior portion of the upper lobe of the left, were the only parts that presented the natural colour of the lung; all the rest was of a deep livid hue. The parts above mentioned were alone inflated when air was thrown into the lungs. The right lung was in every portion of it closely infiltrated with small, round, crude tubercles, not one of which presented a trace of softening. The intervening space of the parenchyma, with the exception of the anterior fringes, was gorged with dark-coloured blood. There was not the least appearance of hepatization, but the blood did not escape on cut portions of the lung being pressed. No part of it sank in water. Its texture was not granular, and it readily broke down under the finger. The fringes were equally well supplied with tubercles; some of the bronchial glands were infiltrated with a soft cheesy matter. The left lung was also closely studded with the same kind of tubercle observed in the right; the lower lobe and the posterior surface of the upper were gorged with blood. In neither lung was there any aggregation of the tubercles, all were distinct from each other; the heart appeared large *in situ;* its envelope contained eight ounces of a lemon-coloured fluid. Both ventricles were gorged with coagulated blood: the right was greatly dilated, and its parietes very thin; the walls of the left were not thick."

Mr. P. observes that the cases narrated "present few features in common with the ordinary examples of phthisis." On the contrary, he says, "their whole course was attended by phenomena the very opposite to those the disease in general exhibits." The peculiarities of these cases, we think, with the author, may be fairly attributable to the great infiltration of tubercular matter into the lungs—the necessary obstruction to the circulation there—and the circumstance of the tubercular matter not making its way out in the form of purulent expectoration. The heart, in both cases was diseased; but not to that extent as to be the cause of death.

## PHLEGMASIA CŒRULIA DOLENS.

A middle aged woman was attacked, about three weeks after delivery, with symptoms of an intense peritonitis, for the removal of which the most active measures were necessary. These were succeeded by a state of extreme prostration, and after a few days, intense and universal bronchitis set in; so severe as for a considerable time to leave scarcely a hope for the recovery of the patient. It became necessary after the first few days of this attack, to have recourse to the free use of stimulants, consisting of wine, the decoction of senega with carbonate of ammonia, and the employment of blisters to the chest. The chest affection gradually subsided, and the patient appeared convalescent, when she was suddenly attacked during the night with violent pain in the left leg and thigh: and on the next morning the affected extremity presented all the appearance of acute general phlegmasia dolens, with the exception of the colour. The limb from the groin downwards, was universally and equally enlarged. It was hot, elastic, exquisitely sensible, and deprived of motion. There was little or no swelling of the glands of the groin, nor was there any apparently cordy state of the saphena; but the remarkable circumstance was the colour of the limb, which was a deep purple hue, in some places almost black, and presenting more or less of a mottled appearance. This coloration was universal, and presented a most extraordinary contrast with the rest of the body.

The patient was treated by leeching, and the free exhibition of calomel and opium, the strength being supported by nutritious broths. The discoloration of the limb disappeared in the course of a few days, and her recovery was rapid and complete.

It was remarked in this case, that during the first days of the inflammation, no pulsation could be felt in the femoral artery at the groin. But this returned with the subsidence of the swelling.*

## ON TRANSVERSE MALPOSITION OF THE HEAD, AS A CAUSE OF DIFFICULT LABOUR. By W. F. MONTGOMERY, M.D. Professor of Midwifery to the King and Queen's College of Physicians, Ireland, &c. &c.

This paper forms one of a series in our highly respected contemporary of the Sister Isle. In a former number of the same Journal, Dr. M. insisted strongly on the necessity of an intimate acquaintance with the mechanism of labour, and especially with the exact relations which the different parts of the child's head observe with those of the pelvis, during the process of natural parturition—a knowledge which often prevents the necessity of having recourse to instruments. Dr. M.'s observations, and the two cases in illustration, are so important in themselves, and so incapable of abbreviation, as to language, that we think a couple or three pages of this Journal may be well dedicated to their insertion.

---

* Dublin Journal, November, 1834.

"I presume I may take for granted, that every one engaged in midwifery practice, has from time to time met with cases in which, while every thing seemed favorably circumstanced, and the labour was apparently proceeding expeditiously to its termination, the head has become suddenly stationary in the *cavity of the pelvis*, and there remained for many hours, or perhaps until a necessity has arisen for adopting instant means of delivery; and this too when there really existed no deficiency of space to prevent its free passage. The occasional cause of this species of arrest, I believe to be not at all generally understood, which I shall now endeavour to elucidate, by a description of a particular kind of displacement to which I have been in the habit in my lectures, of applying the name of *transverse malposition;* and by the detail of one or two cases in which its detection afforded an opportunity of giving instant and complete relief, and happily terminating a severe and protracted state of suffering.

I may just premise, that in the most perfectly natural labour, the head enters the pelvis with its longer axis in coincidence with one of the oblique diameters of that cavity, and with the chin pressed up close upon the chest, until the vertex has descended so low as to press upon the soft parts forming the floor of the pelvis; the occiput then begins to advance towards the arch of the pubis, and the face retreats towards the hollow of the sacrum; next the chin recedes from the chest, and the occiput issuing from under the pubis, the head escapes by revolving as it were on a pivot under the anterior wall of the pelvis, so that in this way the head passes through the bony and unyielding chamber of the pelvis, in such a position, that it occupies the least possible dimensions, and the departure of the chin from the chest, which immediately requires more accommodation, does not take place until the occiput having cleared the confines of the pelvis has *admitted* space to allow of its escape. But occasionally this felicitous arrangement is disturbed, and complete arrest of the head produced by the deviation which occurs thus; the head having entered the cavity of the pelvis in the position already described, the occiput, instead of moving forwards towards the pubis, recedes towards the spinous process of the ischium, and the face, instead of retreating towards the sacrum, falls into the space between the opposite spinous process of the ischium and its tuberosity; and the chin having receded from the chest, the head is placed with respect to the outlet in the most unfavourable manner possible, since it presents to it the greatest possible dimensions which it is capable of assuming, its longest diameter resting its extremities on the opposite tuberosities of the ischia, while at the same time the parietal bone rests on the lower part of the sacrum and coccyx, so that the head is in the condition of a ball supported on three nearly equi-distant, solid, and immoveable points; under which circumstances the action of the uterus, however vigorous, seems totally incapable of either changing the relations thus established, or of effecting the delivery, while they continue as they are. On examining, the finger will pass readily between the head and the pubis, and also posteriorly except at the point of the sacrum, but there, and opposite the tuberosities of the ischia, the head is felt to be closely locked; the anterior fontanelle is found to be in the centre of the presentation, and the sagittal suture can be traced exactly across the outlet from side to side. How completely and how long this malposition will resist the most powerful action* of the uterus, and how easily may it be rectified, will appear sufficiently from the subjoined cases; from which also it will be seen, that this difficulty (occurring as it does at a time when from the advanced position of the head, and the state of the perineum and other soft parts, delivery is momentarily expected) is likely to be productive of extreme embarrassment to the attendant, the more especially as the previous birth of full grown children or even the circumstances of the case may of themselves afford proof, that there is no natural deficiency of space, since the head may without difficulty be raised from its situation, to which however it immediately returns, and will there remain until the necessary rectification is effected, which should be done in the following manner. Apply two fingers along the junction of the parietal and frontal bones anteriorly, then *in the absence of pain* press up the forehead and push it backwards towards the sacrum, and there retain it till the access of the next pain which will in general complete the rectification, and the delivery is speedily accomplished, at least it so happened in the instances which came under my observation. It is scarcely necessary to add, that if, during the descent of the head, a tendency to this malposition be observed, we should at once endeavour to prevent its occurrence, by adopting the means already pointed out as suited for its correction when established; and this I have succeeded in effecting in a few instances.

---

* "Valentissimi dolores nihil proficiunt."—ROEDERER.

Case 1.—On Wednesday, July 15, 1829, I was requested to see a patient with the late Mr. Gregory, and Dr. Carter; labour had commenced on the previous Monday evening, and proceeded actively on Tuesday; by six o'clock, p. m., the perineum was distended, and the head apparently on the point of being born; in this situation, however, it remained at nine o'clock, a. m. of Wednesday, when I saw her; although the uterus had continued to act most energetically the whole of the intervening time, and the soft parts were perfectly relaxed. It was the patient's second labour; she was young, healthy, and well-formed, and had about eighteen months before borne her first child, which was full sized, after an easy labour of about five or six hours, so that deficiency of space was not probable. On examination I found the head pressing on the perineum, I could pass my finger quite easily between it and the symphisis pubis, but at the sides there was no room at all: the anterior fontanelle was in the centre of the passage, the sagittal suture coinciding with the transverse diameter of the outlet, and the occiput turned to the left ischium: the uterus was acting violently, but produced no other effect upon the head than that of pressing it a little downwards during each pain, on the cessation of which it immediately resumed its original situation. Under these circumstances, I proposed manual rectification of the displacement evidently existing; and having applied my fingers, as already described, along the side of the forehead, I raised and pushed it backwards, towards the right sacro-iliac symphisis, in the interval between two contractions of the uterus; I there retained it, and on the accession of the next pain, I repeated the pressure backwards, when the forehead immediately glided to its proper place, at the same time the vertex moved forwards to the arch of the pubis, and *in about two minutes* the delivery was completed by the birth of a fine healthy child.

Case 2.—On the 11th of January, 1834, while lecturing at Sir Patrick Dun's Hospital, I received an urgent message from Mr. Dunlop, requesting my assistance in a case of obstructed labour, which he had been called to see, and in which, from the extreme violence of the uterine action, he apprehended rupture of the uterus, if the head was not speedily extricated; it was the woman's fifth labour, the four former having been short, and in every respect favourable. In the present instance, symptoms of labour had come on the evening before, the pains had continued gentle through the night, but towards morning they became more active, and at half-past seven o'clock the head was pressing upon the perineum to such a degree, that its exit was momentarily expected, but there it remained, without any further advance, when I arrived at half-past eleven, although the uterus had been, during the whole of the intervening four hours, acting incessantly and so powerfully that its rupture was with great reason apprehended. On examination, I found the perineum and soft parts protruded by the head, they were unusually relaxed and yielding; the head lay across the outlet of the pelvis, with the occiput resting against the tuberosity of the *right* ischium, and the forehead against the left, having probably descended in the second position; there was abundance of space between it and the pubis, *and it could be easily raised into the cavity of the pelvis*, but the next pain instantly forced it back to its resting place, and when there, the uterine action, although so strong, had no further effect on it whatever. I immediately adopted the same mode of rectification as in the former case, by elevating the forehead, and pushing it round towards the sacrum, when it almost instantly assumed its proper relations under the influence of a pain, *and the very next contraction of the uterus expelled it;* the body immediately followed, and the delivery was completed in *less than two minutes* from the time of effecting the change of position in the head. The child was alive and vigorous. I was fortunate enough in this case to have the valuable assistance of my friend Dr. Darley, who happened to be with me when I was sent for.

With reference to these cases, it is to be observed, that the subjects of them were women who had already borne children without any difficulty, and that there was evidence at the time, from the circumstances of their cases, that there was abundance of space, as the event fully proved; and yet the obstacle created merely by this kind of malposition of the head was such as to resist, in the one instance for *fifteen hours*, and in the other for *four*, action of the uterus, so powerful that it effected the delivery almost the very instant that the displacement was corrected.

As to the cause of this malposition, I am not prepared to offer any satisfactory explanation, nor is it, as far as I can see, a matter of the least consequence. The idea of Levret, that such misplacements of the head were caused by the situation of the placenta, is so unsupported by either facts or reasoning, and is indeed so fantastic, that I think we may dismiss it at once without further consideration. Neither is the hypothesis, which would explain them by obliquity either of situation or action of the uterus, in any degree more satisfactory. Rœderer ascribes some such deviations to misdirection of the shoulders, which he supposes in such cases to be placed across the smaller diameter of the brim; that this may be so occasionally is not improbable, but in the particular species under consideration, I think it certainly is not the case, because we can so completely correct it, merely by changing, and slightly too, the position of the head without moving the child's body at all. One thing, however, is certain, that when the malposition has taken place, the chin of the child has receded from the chest, and the forehead has sunk as low as the occiput, and that its re-elevation is essential to the rectification, and must be accomplished before delivery will take place; for while the transverse position continues, the natural efforts will not be sufficient, the forceps will not answer our purpose, and turning is out of the question, so that if the real nature of the case be not recognized, recourse will be almost certainly had to the appalling operation of cephalotomy, and a human life unnecessarily sacrificed. It seems very reasonable to suppose, that an unusual projection of curvature of the spinous process of the ischium might have the effect of producing this accident, because, under such circumstances, the forehead being prevented from gliding backwards, and being still acted on by the uterine contractions, would almost of necessity, be forced downwards into the situation where we find it in such cases, and the occiput would, of course, assume the corresponding situation at the opposite side of the outlet."

Our obstetrical brethren, now constituting nineteen-twentieths of the profession, will feel interested in the perusal of the foregoing observations.

## Incipient Phthisical Symptoms relieved.

Dr. Forsayth, of Templemore, in the county of Tipperary, has forwarded a case of what appears to have been commencing phthisis, in which the symptoms were perfectly relieved. The issue is of course uncertain, and melancholy experience forbids both Dr. Forsayth and ourselves to indulge in confident hopes of the result.

The patient was a young gentleman, aged 18, whose sister had died of phthisis previously. We need not enumerate his symptoms, which were highly characteristic, and such as would readily occur to the mind of the intelligent practitioner. The treatment was as follows.

"I confined him to *strict vegetable* diet, except milk—no vinous liquor whatsoever: tartar-emetic ointment to the affected side of the chest—bowels kept free by aloes and hard soap—and tinct. digitalis, 10 gtt. ter die, increasing 1 gtt. each dose, until the pulse fell to 56, at which I kept it.

The digitalis agreed, and he began slowly to amend. Pulse 56—respiration 24 to 26—cough declined—dyspnœa disappeared—no night-sweats, and less pain in the chest; and in two months nearly all the symptoms left him. Strength and appetite returned—tartar-emetic ointment, applied at three months, took away some remaining pain—animal food allowed—digitalis discontinued, and is now without any complaint, except slight uneasiness of breathing if he runs any distance."

After this, Dr. F. allowed his young patient some animal food. The method pursued by our correspondent was judicious. If, formerly, physicians kept phthisical patients too low, we fear they now fly to the opposite extreme, and aggravate inflammatory action by tonics and by food. They should recollect that, in some instances, tubercles originate in inflammation—that in all, their development is accompanied, in certain stages, by inflammatory action. Even when the pulse is most quiescent, and the skin most cool, a slight change of weather, or increase of food, will suddenly be followed by an access of fever, pain, and inflamation. Few cases require more judgment on the part of the medical attendant than phthisis; unable to cure, he may aggravate or relieve.

Dr. Forsayth sends us an interesting notice of an ossified tunica vaginalis testis.

"I have also in my possession, found in an old man, who died of fever here, a dried preparation of an ossified tunica vaginalis testis. Surface uneven—white fracture earthy—testis, tunica vaginalis testis, and albuginea healthy—two or three spots unossified, and transparent like glass. I believe there are two in London—none in Dublin Surgical Museum. It weighs ℥j. ʒiij. apothec. contained water:—Length, 3½ in.—breadth, 2 in.—greatest thickness, ¼ in.

Soluble in nitric and muriatic acids with effervescence, leaving an equal size of gelatine or cartilage. By the blow-pipe it blackens, and remains white, and is entirely soluble in the acids."

---

## Case of Ununited Fracture, cured by Friction and Pressure.

In a late number of this Journal, we noticed some remarks of Sir Benjamin Brodie's on the treatment of ununited fracture. Those remarks were founded on a case of ununited fracture of the tibia, for which Sir B. Brodie employed the seton. The present fact may be added to the collection at which that eminent surgeon glanced. It is related in the Number of the American Journal of the Medical Sciences, for August of this year, by the gentleman under whose notice it occurred—Dr. Parrish, jun. of Philadelphia.

*Case.* An athletic man, aged 27, fractured the left humerus in March, 1833. He immediately applied to a surgeon in a neighbouring town, who carefully adjusted the fragments, and placed the limb in splints; the injured parts being but slightly painful, the first dressings were allowed to remain undisturbed for about three weeks, when other splints were substituted, and continued on the limb, with occasional alterations, for three months. At the end of this period, finding no improvement, his physician advised him to seek further advice.

On removing the splints, the limb was found to be much reduced in size, its muscular power was obliterated, and its capillary circulation feeble. He was advised to lay aside the splints and bandages, to use the limb moderately, and to keep up a steady system of external frictions. This plan was pursued till the Autumn, when no amendment was perceptible, and he placed himself under the care of Dr. Parrish and Dr. William Ashmead. The following was then his state.

" On a careful examination of the parts, we found an unusual obliquity in the fractured portions, the surfaces exposed being not less than three inches in extent, the edges of these surfaces the rounded extremities of the fragments, and the crevice separating the opposing surfaces of the fracture, could be distinctly traced by the fingers. This examination was rendered peculiarly satisfactory, in consequence of the emaciation and flaccidity of the limb.

Owing to the remarkable extent of the fracture, and the loss of muscular power in the arm, the fragments, which in a more vigorous state of the surrounding parts, might have been kept in apposition, were separated from each other to a greater or less extent, as they were influenced by the position of the limb. When the fore-arm was flexed upon the arm, in the usual attitude for fractured humerus, the surface of the fragments were separated throughout their whole extent, but more particularly at their upper portion—and it was only in one position that their apposition was effected.

The limb being placed in that position, which we found upon trial effected a perfect coaptation of the parts, the upper and lower portions of the broken bone were grasped by the hands, and a firm, gliding motion communicated, so that the surfaces could be felt rubbing upon each other. This process was continued for several minutes, and the limb was then secured in this position by light dressings in an angular box—a piece of thin board being firmly bound over the seat of fracture.

This process was repeated for several successive mornings, and was performed by Dr. Ashmead or myself: the few first trials excited but little sensation in the fractured surfaces, though the force used was as great as we could command. In a few days, however, the patient began to feel pain, which increased at every repetition of the process, until it became acute. The fractured ends were less moveable, heat and action were re-established in the limb, and we were obliged to diminish the frequency and severity of the friction.

In about a month, bony union became evident at the lower extremity of the fracture, which proceeded rapidly, and so agglutinated the lower portion as to prevent the necessity of the box: shooting pains were frequently experienced in the limb, and any attempt to disturb it produced considerable suffering. Under these circumstances, we declined interfering with the salutary operations of Nature, which proceeded most happily. In about two months after the commencement of the practice, we had the satisfaction of observing, that a firm bed of callus was thrown out over the whole surface of this extensive fracture.

The muscles soon acquired their accustomed volume and force, and the man has since been pursuing his laborious occupation."

The employment of friction is not new; indeed in most cases, where union after fracture is sluggish, this combined with pressure, is the first expedient usually had recourse to. The case of Dr. Parrish is deserving of notice, from its shewing how much may sometimes be effected, by a steady perseverance in a simple plan of treatment.

## HYPERTROPHY OF THE MAMMÆ.

We have lately, upon several occasions, adverted to this rather curious affection. The following is another instance of it. It is related in the same Journal from which we have extracted the preceding case, by Dr. Huston, resident physician in the Philadelphia Alms-House.

*Case.* A coloured girl had, from early life, been an inmate of the Philadelphia Alms-House. At the period of puberty, in addition to the ordinary changes that occur, her left breast was observed to enlarge disproportionately, and in four months after she attained her fourteenth year, it had reached a very formidable size. The complaint, or rather the unnatural growth, continued to increase until about the age of fifteen years and a half, when both breasts enlarged with fresh and great rapidity. A laced jacket was required to support the ponderous mass, yet the girl's activity was apparently unimpaired. She appears to have menstruated only once, and then to a slight extent. On the 14th of April of the present year, she was received into the Alms-House, having been in service for some time previously. She had just completed her sixteenth year. Sloughing had attacked the integuments, on the inferior surface of the left breast, in consequence of a contusion recently received there. There was much pain and febrile irritation. On the 18th, the whole surface of both mammæ evinced a disposition to sphacelate. Low fever had set in, and it was evident that the girl would die; she did die, upon the 22d.

*Dissection.* "Externally the mammæ presented the appearance of two large oviform masses, rising above the clavicle, and extending below the umbilicus. No traces of the nipple could be detected, having been completely embedded by the enormous distention of the parietes of the mammæ. On measuring each breast, the dimensions were ascertained to be as follows:—

*Right Breast.*

| | |
|---|---|
| Greatest circumference | . 34 inches |
| Lesser do. . . . . . | 18 do. |
| Weight . . . . . . . . . . | 12 lbs. |

*Left Breast.*

| | |
|---|---|
| Greatest circumference | . 42 inches |
| Lesser do. . . . . . | 26 do. |
| Weight . . . . . . . . . . | 20 lbs. |

On removing the right breast and exposing its interior, instead of a mass of disease or an accumulation of fluid (as a superficial examination might have induced the belief,) it proved to be a mere hypertrophy of the organ unconnected with structural disease. The adipose and cellular tissues, as well as the whole glandular apparatus, were enormously enlarged, but no appearance of disease or exudation of fluid were perceptible. In short, a healthy structure was found, whose only anomaly was its mammoth proportions.

On examining the organs of generation, the ovaria were found to be larger than natural, and apparently diseased. The uterus did not exceed the ordinary size of females at her age, but two-thirds of its inner surface was coated with a dense covering of coagulable lymph. The muscular system was moderately developed."

Dr. Huston remarks, that the enormous augmentation of the mammæ does not seem to have diverted, in a material degree, the stream of nutrition from the other organs of the body. This may be, and apparently is correct; yet one reflection may induce us to suppose, that considerable debility of the system was produced. In the present instance, a contusion of the skin of the left mamma gave rise to sphacelus, more extensive and more fatal than a similar injury in a healthy person, on a healthy part, would probably occasion. A nearly similar case occurred at St. George's Hospital. A girl travelled up to that institution from the country, on account of enormous hypertrophy of the mammæ. On her journey, she slightly chafed the integument of one with the bone, we believe, of her stays. In a day or two after her admission, this abrasion gave rise to erysipelas, which ran into sloughing with such furious rapidity, that in four and twenty hours she was dead

Morbid growths and morbid alterations of structure, are short-lived; that is, they evince a disposition to ulcerate and slough. They have not the vitality of the healthy tissues, but inflame more frequently, die more readily, and have less capability of resisting natural changes and external injury. It is probably owing to an analogous cause, that the erysipelas and sphacelation, in these two examples of hypertrophy of the mammæ, proceeded to the fatal extent which has been described.

---

## SUBSTANCE OF A CLINICAL LECTURE ON TWO CASES OF HYDROPHOBIA, DELIVERED AT THE CHARING-CROSS HOSPITAL, &c. By J. T. PETTIGREW, F. R. S. &c. Octavo, pp. 35. London, 1834.

By a singular, yet not very unusual coincidence, two cases of this comparatively rare disease were witnessed, in quick succession, in the Charing-Cross Hospital. They received the close attention, and exercised the ingenuity, of Mr. Pettigrew, and they formed the subject of some discussions at the Westminster Medical Society, and the occasion of the present pamphlet.

The cases themselves were most assiduously watched, and are most faithfully recorded. Yet the press of other matter, and the many narrations of instances of this complaint that have been offered to the world, prevent us from attempting much more than allusion to them. That allusion will be brief.

The first case that occurred was that of a man, aged 17, who had been bitten in the left hand by a strange cat, five weeks previously to his admission into the hospital. Some spirits and some salt were the chief applications made use of, and he never was free from pain in the wound. The symptoms had commenced with malaise and general indisposition, on the 18th of October. On the morning of the 21st, he was unable to put the cup to his mouth at breakfast; and at half-past 2, p. m. he was received into the institution. The spasms characteristic of his complaint were induced by the attempt to swallow water, and by the impression of air upon the skin; he was extremely sensitive to cold. Strychnia and mustard sinapisms to the stomach and spine were the means at first resorted to. He continued to get worse till near 6, a.m. of the 22d, when an enema, consisting of five grains of tobacco and a quarter of a pint of water, was thrown into the rectum. Tranquillity almost immediately succeeded; but, at 8, a.m. the paroxysms recurred, and displayed no considerable intermission subsequently. He expired rather suddenly, at a quarter past five, p. m. On one occasion, he was blown on with extreme gentleness by the physician, who stood upwards of four feet from him; he threw himself to the opposite side of the bed, averting his head, and declaring that the wind would move a 74-gun ship! The following were the main particulars elicited upon dissection.

The muscles were of crimson colour, and surcharged with blood. The latter was generally uncoagulated.

In the situation of the bite of the cat, a point of discoloration, resembling the ecchymosis resulting from a leech-bite, was observed under the skin of the thumb of the left hand. A small nervous twig was thought to be greatly reddened.

There was some effusion between the cerebral arachnoid and pia mater, conjoined with a degree of opacity of the former membrane. The bloody points in the brain were very numerous; about 3½ ozs. of fluid were contained in the lateral ventricles; the membranes at the base of the brain, of the pons, and of the medulla oblongata, were of bright red colour, injected, and adherent to the parts in question; and the membranes investing the origins of the 8th and 9th nerves were gorged with blood.

There was nothing remarkable in the spinal cord, nor in its membranes.

The upper part of the pharynx was slightly inflamed. The œsophagus presented some enlargement of its small glandules.

The cardiac end of the stomach was inflamed.

The trachea and bronchiæ were inflamed. The pleura contained a pint of fluid. The lungs were gorged with serum, blood, and sputa. In the central valve, at the arch of the aorta, were some depositions of bony matter.

The second case was that of a young man, who was first attacked with difficulty of breathing and soreness of the throat on the 18th of November. The disease was not suspected till the 20th, on the evening of which he was taken to the hospital. The case was seen in the first instance by Mr. Griffith, an intelligent surgeon of Pimlico. At 11, a.m. of the 21st, he died. A circumstantial and interesting account of the symptoms is presented. On this we cannot venture, but, perhaps, we may observe, that the sensibility to the impression of air upon the skin was more decided than even the horror of fluids. The treatment essentially consisted of the employment of the tobacco enema. It appeared that the patient had been bitten in the hand by a dog, who displayed the early symptoms of rabies, rather less than two months before he himself fell a victim to that cruel malady.

Dissection disclosed little morbid alteration, and none of a satisfactory description. The brain was not vascular, but the pia mater investing the pons varolii and medulla oblongata was injected with arterial blood, and adhered strongly to the parts beneath. The penis was, before and after death, in a state of semi-priapism.

We shall select a few remarks from those addressed by Mr. Pettigrew to the pupils of the hospital. The first refers to the period of time at which the disease most usually appears.

"George Grindley (the second patient) it seems must have been bitten between the 21st and 28th September, and his hydrophobic symptoms commenced on the 18th of November, in this respect corresponding with the period at which most commonly the disease occurs after the bite. In the majority of cases, the disease manifests itself within two months. Dr. Hamilton constructed a table (which I am at present engaged in extending, and the result of which I shall lay before you at a future time), from which it appears that the disease seldom appears before the 19th day or after the 18th month. In one hundred and thirty one cases the number from the 18th to the 30th day are only seventeen; from the 30th to the 59th, six-three; from 2 to 3 months, twenty-three; from 3 to 4 months, nine; 5 months, two; 5 months and 11 days, one; 6 months, one; 7 months, one; 8 months, two; between 8 and 9 months, one; 9 months, two; 11 months, one; 14 months, one; 18 months, two; 19 months, one; which perhaps is, of well authenticated cases, the longest period known. All stated to have occurred beyond this time are probably fabulous, or not depending upon the bite to which they have been referred. The ancients generally ascribed forty days as the time at which the disease would become apparent, and subsequent observation has confirmed the remark. It is not improbable but that the disease may be hastened in its progress by exposure to the cold or other causes; it however appears to be necessary that the poison should lie dormant a certain time to be fitted to exercise its virulent effects, and there are instances on record by a celebrated Italian Physician, Dr. Cocchi, in which the Small Pox has been known to occur and to go through its progress in persons who had been bitten, and who have afterwards fallen victims to the disease."

The latter circumstance is certainly remarkable, yet a little consideration may tend, perhaps, to diminish our surprise. Two diseases seldom run their course together, but two specific poisons may exist at the same time in the system. Thus, a patient with syphilis may take and go through small-pox; measles, and scarlet fever are at times coincident; and other similar instances might be adduced. Each specific poison has peculiar laws, and the pre-occupation of the system with one disease is evidently insufficient to prevent, although, perhaps, it may *tend* to do so, the reception of another.

Mr. Pettigrew notices a vulgar error —that dogs have really a hydrophobia, a dread of liquid. In most rabid animals there is an urgent thirst; in man alone is the repugnance to deglutition very marked or very constant. In him, it is probably dependent on the same cause which exalts the sensibility of the surface of the body, and, indeed, of all the organs of sensation. Who has not remarked the quick ear and the hurried glance of the hydrophobic patient. He is startled by a sound, convulsed by a bright object or a breath, precipitated into a paroxysm by the bare idea of what may cause one. It has been proposed, and apparently absurdly, to perform tracheotomy for this disease. The ingenious conception was founded on an imperfect acquaintance with the disease. For difficulty of deglutition is a symptom only, sometimes prominent, sometimes inconsiderable, and perhaps, not so constant as the morbid sensibility of the surface of the body.

"Various organs of sense (says Mr. P.) have appeared to be rendered more exquisitely sensible under this disease in different cases. The intolerance of light has been noticed by several authors, particularly by Dr. Mead, who mentions the case of a girl who could not endure the light even when her eyelids were closed, and was, therefore obliged to lie with her head under the bed-clothes. The uneasiness created upon beholding mirrors, and shining substances, are of too common occurrence to need further reference on this subject. The most striking symptom in Grindley's case was his extreme sensibility to air. The sense of feeling was here the organ affected, and not a breath of air, however minute, however delicate, when directed upon him, but threw him into convulsions. It brought to my mind a case I saw several years since with my late friend Dr. Powell, at St. Bartholomew's Hospital, in which this same exquisite sensibility existed and in so high a degree, that the mere transit of a fly across the face, without coming into contact with the skin, was a sufficient cause for producing a paroxysm."

Mr. Pettigrew does not despair, nor do we, of a remedy being discovered, at some future time, for hydrophobia. In all diseases, where the lesions of organs are not very serious, it is possible that chance, or ingenious reasoning, or the progress of science, may furnish us with medicines capable of overcoming the morbid action. There was a time when mercury was not exhibited for lues, sulphur for the itch, arsenic or bark for ague. Who shall limit the advance of art?

It is much to be regretted, that we usually are called to treat hydrophobic cases when the malady has already made some progress. The incipient symptoms are obscure; they are those of some ordinary and unimportant ailment. It is not impossible, though, perhaps, not likely, that persons do recover from *such* symptoms. Be this, however, as it may, the tobacco, in the present cases, and probably other remedies in other cases, have been given at a time when the disease had made some head—a time when the experience of centuries whispers that no hope remains.

Mr. Pettigrew, like all judicious surgeons, dwells strongly on the paramount importance of preventive measures. Of these, excision is incomparably the best, and should never be neglected, where circumstances will admit of it. Two persons were bitten by a rabid dog. The wound in one was cauterized by a surgeon, near the Regent's Park. We excised the bitten part in the other. The patient who was cauterized died of hydrophopia; whilst he who had the part removed by the knife is still alive and well.

We shall conclude with Mr. Pettigrew's conclusion, expressing, at the same time, our high opinion of his accomplishments, as a surgeon and a gentleman.

"The human species is, fortunately, less susceptible of infection from the rabid poison than the brute creation. We have the authority of the celebrated John Hunter, an observer of the animal economy in health and disease, whose accuracy no one will venture to question, that a rabid dog bit four dogs and twelve human beings, that of these all the dogs died rabid and the human species escaped the infection. It is desirable, however that excision should never be neglected, and the sooner it is performed the better; though I believe that security will be afforded by the removal of the bitten parts at any period between the infliction of the bite and the occurrence of the first symptoms of hydrophobia. A case in point upon this matter related to me by my friend Mr. Saumarez, who formerly practised very extensively in the neighbourhood of London, is of exceeding interest and importance, and may serve to give consolation to many labouring under an apprehension as to this disease. A grandmother, mother, and three children, were lying in bed, covered with but a small quantity of clothing, when a strange dog entered the bedroom and wounded the whole of them. The animal escaped, and no attention was paid to the circumstance until the grandmother, at about five weeks from the bite, became hydrophobic and died. Mr. Saumarez made enquiry into the case, and learning the particulars of the injury to the mother and three children, recommended that the parts at which the bites had been made should be excised; to this the sufferers readily assented, and the marks were sufficiently obvious to direct Mr. Saumarez in his operations. They all escaped the disease, and at the time Mr. Saumarez communicated to me this interesting case, two years had elapsed, and they were all living."

---

## A PROPOSAL, BY DR. STEWART THORBURN, OF LIVERPOOL, TO DISLOCATE THE HEAD OF THE FEMUR FROM OUT THE ACETABULUM, AS AN IMPORTANT MEAN TOWARDS THE SUCCESSFUL TREATMENT OF MORBUS COXARIUS, OR. "HIP-JOINT DISEASE."

We have received the following letter from an esteemed correspondent, Dr. Thorburn, of Liverpool. We do not entertain the views which he defends, but his proposal may safely be left to the reason and experience of surgeons. Without attempting to open up the argument, we publish the letter as transmitted to us by its author.

"For some time past, I have been intending to submit for the consideration of the profession a measure which, meanwhile, I consider will prove of great advantage, if not in all, yet in a majority of cases of *hip-joint disease*. But, on the present occasion, I shall only enter cursorily on the grounds, agreeably to which I conceive myself authorized in seriously suggesting the prudent adoption of the measure which I have to propose, and which, perchance, may startle many, viz. to dislocate the head of the femur from out the cotyloid cavity.

I would humbly beg to range myself on the side of those pathologists, who beleive that, in the majority of cases, the diseased action constituting MORBUS COXARIUS essentially commences—neither in the cartilages nor synovial membrane—but in the *bones* which enter into the formation of the hip-joint. I am perfectly aware this is directly opposed to the recorded opinions of a very high authority—Sir B. Brodie; but I think the tendency of probabilities is against his, and greatly in favour of the views of those who subscribe to the belief, that the *fons et origo mali*, in hip-joint diseases, originates in the *osseous* tissue. Professor SYME observes—'it is evidently of much consequence to ascertain the nature and most efficient treatment of this disease. As an opportunity of dissecting the parts, in the first and second stages of the morbid process, very seldom occurs, being confined to those cases in which the patient dies of some other disease—the origin of the evil is still involved in considerable obscurity. Different authorities accordingly refer it to thickening of the synovial membrane, ulceration of the cartilages, and suppurations of the bones. But though the second of these opinions be the one generally received in this country, there seems good reason for considering the one last mentioned as nearer the truth. The facts that have been collected by actual examination are in favour of this view, and the symptoms observed externally all lead to the same conlusion.

The long existing pain at *distant* parts of the limb, before any trace of disease at the part really affected can be observed, is strongly characteristic of chronic inflammation in the osseous tissue. The freedom of motion without any crepitus, that continues during the second stage, is hardly reconcilable either with ulceration of the cartilage or thickening of the synovial membrane; and the dissections that have been recorded, in which the bones were always found principally affected, afford a strong proof that they are the original seat of the malady. In the third stage there is unfortunately no want of opportunity for investigation by the knife; but then, as always happens in diseases of the joints which have advanced to suppuration, the whole articular apparatus is so involved in the destructive process, that the part primarily affected cannot be recognized. In three cases which I have dissected, (Professor Syme is speaking of his dissections up to the year 1831) at the beginning of the third stage, that is, after suppuration, but before the matter was discharged externally, the articular cartilage was sound everywhere, both on the head of the femur and on the acetabulum, except a small portion not so large as a sixpence at the centre of this cavity, where it was removed, and allowed a probe to pass into or rather through the bone. In one of these cases the synovial membrane was gelatinous, but not to any considerable extent.

The disease may then be regarded as consisting primarily and essentially in chronic inflammation of the bones composing the joint, of which the pelvic portion usually suffers alone, or at all events much more than the femur, and the practice proper for subduing it, is consequently that which has been found most efficacious in the treatment of such affections of the articular apparatus. This is counter-irritation,' &c. &c.—*See* Syme's *Principles of Surgery*, vol. 1, p. 322.

Mr Ford, in his *Observations on the Diseases of the Hip-joint*, so long ago as 1794, says, "in every case of disease of the hip-joint which has terminated fatally, I have remarked, that the *os innominatum* has been affected by the caries in a more extensive degrée than the *thigh-bone* itself,' &c.

I have adverted to these opinions forasmuch as, on a little reflection, it will be patent to the understanding of all who may peruse these observations, that the validity of, or *faith* reposed in the respective opinions of those who oppose or agree with Sir B. Brodie's views, will materially and naturally influence the *prima facie* reception, which my proposal may meet with. After reading the analytical digest of Sir Benjamin Brodie's improved edition of his standard work on the Joints, in Numbers 41 and 42, for *July* and *October* 1834, of the Medico-Chirurgical Review, embracing (as such digest does) the most prominent views and practical points in the work at large,* I cannot find any remarks which would legitimately appear to militate against the advantages likely to emanate from the prudent adoption of the mean I propose, which, as has been said is—*to dislocate the head of the femur from out the cotyloid cavity* as early as possible after the torturing and usually headstrong disease shall have pronounced itself, through the language of its symptoms, which is neither easily overlooked nor apt to be mistaken by those who are alone entitled to public confidence by being well grounded in the principles and practice of the medical profession.

Sir B. Brodie in common with prior and subsequent observers has noticed that the os femoris cannot be moved about without subjecting the patient to immense torture; that immediately after the complaint is detected, the hip-joint is found to be tender *whenever* PRESSURE is made on it *either before or behind*;—and admits that wherever the pain is situated, it is rendered agonizingly intense by MOTION of the *joint*. Although Sir Benjamin adds—*especially* by whatever occasions PRESSURE of the *ulcerated* CARTILAGINOUS *surfaces*

---

* Also of Mr. Wickham's,—See No. 41, from pages 68 to 84.

*against each other*, &c. yet I apprehend the pain is rendered intense by MOTION of the joint *long before the* CARTILAGES *are implicated*—before the morbid action has got the length of *ulcerating* them. The pain appears to me owing to the globular head of the femur rubbing against the other bones forming the joint, when one or other, or all of them as the case may be, are in a state of diseased action. Ought not the tendency of concurrent probabilities to incline us to attribute such friction or pressure upon, and consequent irritation of a surface or surfaces in a state of morbid action to be the immediate cause which gives rise to the *mental* sensation PAIN, referable to the hip-joint as its *physical* locality? But farther: should they not also be considered as suggesting to practical men as the grand mean (by which to be enabled efficiently to fulfil the *secondary* yet important indications on which I need not enlarge)—to *prevent the head of the femur* fretting or being fretted by FRICTION OF PRESSURE *unavoidably consequent on* MOTION *in the affected joint?* The more or less absolute the state of rest is, the more or less is the relative immunity from pain; and the longer is the disease kept in check, and the recovery by nature's efforts promoted. Let any man observe in his own person or in that of another, how the natural action of the lungs during RESPIRATION perceptibly and notably moves the hip-joint, and he will be constrained to admit, from this alone, that rest cannot ex natura rerum absolutely prevent the hard parts grating against each other, to prevent which, unquestionably constitutes *the* great and one thing needful in the scientific and efficient treatment or morbus coxarius. Would not the measure which I have ventured to propose effectually remove, not only the cause of pain, which plays a most important part in the tragedy of this disease, but the same cause whose continued operation irritates, as I beg leave to think, a nasty inveterate morbid action—call it chronic inflammation, or what you will—into full developement; and which by extending to, ultimately implicates the cartilages and ligaments of the articulation, to the destruction partial or total of its organization? What is the consequence of this disease allowed to run its course, or when unrestrained by surgical interference? Is it not as nearly as may be as I now delineate? The disease we know may run its course in a period varying from a few months to as many years. The analysis of outward *symptoms* not only renders it possible, but their conversion into SIGNS highly probable, that the action extends *from* the OSSEOUS TISSUE *to* the synovial membrane, interarticular, cotyloid, and capsular ligaments, which are destroyed by "ulcerative absorption." Nor is this all: emaciation of, and abeyance of the muscular tonicity in the soft parts around the diseased locality, have *simultaneously* been in progression; and a natural and important link in the complicated chain of cause and effect, namely, "spontaneous" dislocation of the joint, as it has figuratively but most erroneously been styled, takes place. And what most interesting phenomena do not many, indeed all of *such*, cases present to the notice of nature's secretary, the philosophic observer! Is there not a perceptible check to the progress of the disease—a breathing time as it were, even in cases apparently past hope? and in those less complicated, is there not an immediate cessation of pain for which the wretched sufferer pours forth a prayer of thanks, and communicates unasked intelligence of the fact of his relief, to the attendants? Have not cases again and again been completely arrested in their otherwise fatal career, when such dislocation occurred, though tardily brought about by the very disease itself? The nearest approximation to absolute rest in such cases can be secured, and other means superadded and successfully too, in suspending the disease through medium of *anchylosis*, or the formation of a false but *useful* joint, with a more or less perfect recovery of the general health.

To my mind an essential feature in such recoveries is, the globular head of the femur *leaving the cotyloid* cavity. To such, in great measure, if not entirely, must be attributed the subsidence of the disease, and the steady success, transient or permanent, of subsidiary means of cure, before the developement of abscesses, burrowing fistulous sores, and severe constitutional disturbance have exhausted the renitent staminal powers of the organism. In conclusion; for the present suffice that I say, it has been from dwelling and reflecting on considerations akin to those, merely outlined as it were here, after analyzing as correctly as I could, the sequence of effects from causes in their most probable order of dependence, that I have been induced to submit to the consideration of such practical men as are guided by observation and enlightened by the revealing torch of pathology, these queries—

1st. Would not the artificial dislocation of the head of the femur from out the cotyloid cavity, in a majority if not in all cases of MORBUS COXARIUS be among the most expedient measures which in the present state of surgery could be adopted in the treatment of this disease?

2nd. If so—ought not the mean proposed to be resorted to as early as possible, (or when?) after the pronounced PRESENCE of the disease?

I am, Gentlemen, faithfully yours,
J. STEWART THORBURN, M.D.
*Liverpool*, *Oct.* 30*th*, 1834.

P.S. Having exhausted my paper, I can only allude to the interesting but peculiar views ascribed to *Monsieur Dzondi*, who is alleged to speak upon the strength of thirty years' experience. But surely it must be of the exception, not the rule, when he is represented from the *Algemeine Medic. Zeitung* as asserting that, "the seat of the inflammation at first is always exterior to the joint; it is neither in the bone itself, in the synovial membrane, fibro-cartilage, nor in the synovial glands, but invariably, according to the experience of M.D. is in the outer surface of the articular capsule, in the fibrous structures about it, and in the periosteum of the bone round the circumference of the acetabulum, and of the upper part of the femur itself. The limits within which the inflammatory process is usually at first circumscribed, are about one inch in extent all round the rim, or edge of the acetabular cavity, but the whole of this space is not generally affected simultaneously; the irritation may be concentrated either at one part of the capsule, or of the periosteum of the os ilii, or of the cervix femoris, or round the border of the acetabulum, or on the great trochanter."—*Vide Medico-Chirurgical Review*, Number 41, p. 239.

## PENDULOUS TUMOR GROWING FROM THE EXTERNAL EAR.*

It appears that goitre prevails in the valley of Nipal, in Hindostan, and that a pendulous tumor growing from the external ear is also frequent in the natives of that district. The two morbid growths are often observed in the same individual. Dr. Campbell presented to the Medical and Physical Society of Calcutta, two tumors which he removed from the ears of a female. They grew from the helices and drew down and doubled the ear over the external meatus auditorious, so as greatly to obstruct hearing. The surfaces of the tumors were uneven, and their feel fleshy, but firm; their internal structure is described as resembling that of mammary sarcoma. They were removed by simple incision with a scalpel, and weighed together 24 ounces. The wounds soon healed, and the ears resumed their natural position. The patient from whom these tumors were taken, is affected with a large bronchocele; her eldest daughter, aged nine years, has a tumor, the size of a walnut, attached to each external ear, and another daughter, aged six years, has a goitre of three years growth, which is as large as an orange. In the same communication the author states, that bronchocele very often occurs in animals in Nipal, lambs and kids being often born with remarkable morbid developement of the thyroid gland.

---

* Trans. of the Med. and Phys. Society of Calcutta, Vol. VI. 1833.

### OCCLUSION OF THE DUCTUS COMMUNIS CHOLEDOCHUS.*

An European pensioner at Chunar, æt. 31, who had been for eleven years a resident in India, suffered for three months from symptoms of chronic dysentery, attended with pain in the region of the liver; for which he was repeatedly salivated, but without benefit; he gradually sunk under the dysenteric symptoms. On post-mortem examination, the mucous membrane of the great intestines was found in a state of ulceration; the liver was of a dark color, but not otherwise diseased; the gall-bladder contained a small quantity of dark viscid bile: the Ductus Communis Cholidochus was compressed by an enlarged gland, seated in the capsule of Glisson, and its canal was obliterated. The author refers to the cases of occlusion of the biliary ducts, recorded by Mr. Twining, in the 5th vol. of this Society's Transactions, in proof of the frequency of obliteration of these ducts; and also mentions Portal's case of obliteration of the biliary ducts as well as the gall-bladder, related in the treatise *Sar la nature et le traitement des maladies du foi;* Dr. Farre's case in his *Morb. Anat. of the Liver;* Dr. Todd's case in the 1st. vol. Dublin Hospital Reports, and Dr. Percival's case in the 2nd vol. of the same work.

### OPERATION OF LITHOTOMY AND PREVALENCE OF CALCULOUS COMPLAINTS IN INDIA.

It appears to be now an established fact, that calculous complaints are frequent among the native population of India. In the last volume of the Calcutta Society's Transactions, are several communications on this subject. One gentleman, Mr. F. H. Brett, of Shajehanpore, relates the particulars of twenty-two cases in which he performed the lateral operation of lithotomy. The cases themselves present no peculiar features of importance. Mr. Brett observes:

"I have been unfortunate in losing four patients out of 22, but I have never rejected any that have presented themselves, where there was a possibility of relieving human suffering of so intense a character. Three of the fatal cases did not request my aid until their constitutions were completely exhausted by the protracted irritation. The unfortunate terminations (excepting the cachectic child No. 13), happened likewise in the hot season, when the weather was unusually sultry and unhealthy. Two of these were carried off by Tetanus, and one of the four fatal cases survived the operation a month, having been a martyr to the disease, *thirty years.*

In the last fifteen operations I employed merely a common scalpel, having lost the only beaked knife in my possession; and finding this single instrument simplifies the operation, I now generally prefer it to any other, having required no other instrument than the scalpel where the calculi were large, as in cases 15, 17, and 20."

He always employs the straight staff, and he thinks that one great advantage arising from it, is its power of lowering the prostate gland and neck of the bladder towards the perineum, when its handle is only slightly inclined towards the operator. The latter is not obliged to cut so deep as when he uses the curved staff, the prostate being very distinctly "seen" on completing the second incision. On glancing at the cases we are struck by the prevalence of oxalate of lime as an ingredient in the calculi.

Mr. Burnard, of Benares, relates five cases in which he performed the operation. The patients all did well. Mr. Darby, of Almorah, details four, in which the operation was equally successful. The latter surgeon used a common scalpel, a grooved staff, and forceps. Mr. Bell, of Hawalbang, presents three cases. He states that the native surgeons sometimes cut for the stone much after the old method "on the gripe," as it was termed, but they will never undertake the operation unless an application has been first made to the civil power, stating, that in the event of death, the operator is not to be prosecuted by the relatives of the patient. A prosecution of this nature did actually take place some years ago at Sireenuggur. A similar state of things exists in Turkey, and has characterized the barbarous periods of most nations.

---

* Ibid.

It would seem that the Indians bear the operation of lithotomy well; for, the surgeons are miserably stocked with tools, and operate under great consequent disadvantages. Mr. Bell, for instance, was compelled to employ a common country blacksmith to construct his instruments, and in one of his cases the forceps broke, and a stone was in consequence left in the bladder.

Dr. M'Gregor, of Loodianah, communicates another case in which lithotomy was successfully performed. He employed the straight staff. With a notice of a case of sloughing of the scrotum, in consequence of the impaction of an urinary calculus in the urethra, we dismiss the present subject.

A sepoy was received into the hospital at Subathoo, in May, 1832, with much swelling and sloughing of the scrotum, and great fulness and tenderness in the perinæum.

"He says the swelling only commenced nine days ago, although for the last 11 years he has experienced the greatest difficulty in passing urine, in consequence of a hard substance lodged in the urethra; this was first felt in the perinæum 11 years ago, since which time it has slowly, by the efforts of the bladder and assistance of his fingers, been brought to within an inch of the orifice of the urethra, where it has been fixed for the last three years. At first the bladder was emptied with much pain, the urine flowing guttatim; latterly, from having squeezed the parts frequently in his fingers, the difficulty became less. On examining the parts, I found the prepuce covering the glans penis, and with an opening barely sufficient to admit the small end of a probe; the hardness he mentioned was easily felt where the urethra joins the glans, and evidently caused by a small calculus; he was not aware of any increased difficulty in making water just before the swelling appeared, but first felt the uneasiness about the perinæum, after a long morning drill, nine days ago. The prepuce was divided with a scalpel, and the glans was uncovered; the stone was then easily taken out by enlarging the orifice of the urethra: about one half of the stone was lodged in the substance of the glans, and from its form (mulberry) it came away in small grains; the portion projecting into the urethra came away entire, and is forwarded with this memorandum. A catheter was introduced after this, and the bladder emptied without any difficulty. I then made an opening into the tumor in the perinæum, and discharged about 1½oz. of fœtid watery matter, without relieving in any way the tension of the scrotum. On scarifying the lower part of it with a lancet, a watery discharge came away; the catheter was withdrawn, and a large warm poultice put over the whole."

It is sufficient to observe in continuation, that the entire scrotum sloughed, that granulations arose on the exposed testicles, that the latter became gradually encased in skin, and that Mr. Mitchelson, the surgeon and reporter, indulges the expectation of the ultimate accomplishment of a respectable sort of scrotum.

We lately saw an instance of sloughing of the scrotum from effusion of urine, the latter being occasioned by a small calculus obstructing the urethra. The result was less fortunate than in the case detailed above.

In conclusion we will offer but one remark. The advance of information on the subject of urinary maladies demands, on the part of the narrator, an acquaintance with, and record of, the state of the urinary secretion. Without such, the knowledge of the case must be imperfect; the account of it comparatively valueless.

Yet we find we must indulge in some further "novissima verba." Lithotrity has been introduced and successfully practised in Calcutta. Dr. Cassanova presents the particulars of two cases in which he adopted the method of Civiale with success. He does not appear to be aware of the improvements effected in the operation by the use of the "percuteur." The hammer or the screw will ultimately supersede the drill-bow and the saw.

---

## Dr. Edwards on the Physiological Characters of the Races of Mankind.

M. Amédée Thierry has published a History of the Gauls, which gave rise to a letter, and to many speculations, on the part of no mean physiologist, Doctor Milne Edwards. For what we know of either, we are indebted to the Phrenological Journal, for December, 1834. We shall not attempt a consistent account of all that Dr. Edwards thinks or has observed. The gist of his letter is an attempt to prove, that certain types prevail in modern nations, by which we may recognize their forefathers and origin. He starts with combating the popular belief, that tribes and nations have become extinct. He argues with much force in the following strain:—

"When a people is conquered, and has lost its independence, as it no longer forms a nation, it ceases to exist in history; and we are tempted to believe that in such revolutions each disaster annihilates the previously existing races. But an attentive study of languages enables us to detect, in those spoken at the present day, the ancient idioms which have formed them, and thus to trace, in countries where otherwise we should never have suspected it, an uninterrupted connexion between the ancient and modern inhabitants. If, then, the forms of speech leave traces which betray their ancient origin, what are we to think of the physical characters of the race? Are they less permanent? Do we retain nothing of the features of our ancestors? Has climate so changed them that they can no longer be recognized? Has the mixture of races confounded every thing? Has civilization regenerated every thing? Has decay degraded every thing? Has force exterminated or expelled entire people? Such are the questions which must be briefly examined, before coming to the observations which are the subject of this work.

We agree in the main with Dr. Edwards. Yet we would not wish to depend more upon his line of reasoning than it will safely bear. A language may subsist when its original proprietors are gone. The admixtures of Greek roots, in the modern European tongues, is out of all proportion to the extant descendants of the old Greek race; indeed, both Greek and Latin words have been plentifully soldered into our own language in the last century. Doctor Johnson, it is well known, made almost exclusive use of classical derivatives, and added many to the then existing stock. The writer of the Letters of Junius, on the contrary, has preferred the Saxon portion of our tongue, and those Letters consitute a noble specimen of its terse and manly vigour. It is easy to imagine that a race may gradually become extinct, yet survive long enough to impress its language and customs on its successors. To revert to Dr. Edwards.

In order to demonstrate his proposition—that the types of former races still remain—Dr. Edwards proceeds to clear away the arguments which the influence of climate and the mixture of races might afford.

He denies, or at least disputes, the power of climate to effect material alterations, and he instances the Jews, who appear to preserve, in Asia and in Europe, those distinctive features depicted, 3000 years ago, in paintings in the tombs of Egyptian Kings.

The mixture of races presents a more complex difficulty to unravel. Yet Dr. Edwards combines the process of cutting and untying, to disentangle the unyielding knot.

"First (he proceeds), we must consider the relative number of the two races. Supposing *a very great disproportion*, the type of the smaller number will finally disappear. If a Negro and a white produce a mulatto, this mulatto with a white produces an individual nearer to the white; and after five and sometimes even four crossings with white blood, the black taint can no longer be perceived. The same is observed in domesticated animals. This conclusion, at first, appears unfavourable to the search after ancient races among modern nations; and it would be so in the case of such races as had formed but a minute fraction of the mass; but where the mass has been great and preponderating, this principle shews, on the contrary, that the type of the race must still exist. If, then, where no restrictions as to mixture of races exist, the least numerous, if the disproportion be great, finally disappears, still less will the type of the more numerous be altered, if, as in most cases occurs, such restrictions do exist.

Let us now take the other extreme case, namely, where the two races are *equal in number*. What is required, that both should disappear, and form only one intermediate type?

Each individual of the one race must unite with an individual of the other, or at least each race must have nearly an equal share in the amalgamation of physical characters. Such are the conditions absolutely necessary; and if their occurrence be not impossible, it is, at least, in the highest degree improbable.

When animals of different species are crossed, they produce an animal of an intermediate type, or a mule; but when different varieties of the same species are mixed, the result is often quite different. M. Caladon, of Geneva, made a very striking experiment, which bears strongly on this point. He procured a great number of white mice, as well as of common brown mice, studied their habits, and found means to cause them to breed. In his experiments he always put together mice of different colours,expecting a mixed race; but this did not occur in one instance. All the young mice were either white or brown, but each type was produced always in a state of purity.

Even in the case of varieties of the same species, we have an intermediate type or mule, but this is when the varieties differ most from each other: when, as in the case of the mice they approach very nearly, mules are not produced. In both cases we see one common principle, namely, that the mother often produces a being of a type different from her own—less so, however, in the latter case. The same principle is seen even in the same variety; for here also the mother, in producing a male, gives birth to a being whose type differs, and in some cases differs very much, from her own.

Now, the same is observed in man. The varieties which differ most strongly, such as the Negro and white, when crossed, produce mules; and when varieties more nearly resembling each other are crossed, the descendants sometimes resemble one parent, sometimes the other, sometimes both. This is the cause of the great variety observable in modern nations; among which, however, we can always observe specimens of the pure types which have entered into their composition. Thus, even if two races having considerable resemblance to each other, and in equal numbers, were to mix without limitation, the original types would still frequently occur in their descendants.

Another cause which prevents the disappearance of the original types where there has been no great disproportion of numbers, is the geographical distribution of the races. They cannot be so thoroughly mixed that the one or the other shall not predominate in some district, where, of course, the type of the race so predominating must exist.

A type may occasionally disappear by extermination. Thus the Gaunches, savages who inhabited the Canary Isles, have disappeared; but their number was small, and they were confined to small islands. The Caribs, likewise, for the same reason, have almost disappeared from the Caribbee Islands, although they are said still to exist on the continent. But it is impossible to extirpate a numerous nation, more especially when they have attained a certain degree of civilization. In that case, it becomes the interest of the conquerors to preserve the conquered people as slaves, and not to destroy them; and we have no example in history of a *whole people* sacrificing themselves rather than submit to such slavery. On the other hand, we must suppose an incredible rage and cruelty on the part of the conquerors, if a whole people is to be exterminated. When it was proposed to Genghis Khan, by some of his counsellors, to extirpate the Chinese whom he had conquered in the north of China, as being useless to the conquerors, one of his ministers, Yeliu-thou-tsai, made the emperor observe, that in advancing towards the south, his armies would be in want of many things which it would be easy to procure by imposing on the conquered people contributions, not oppressive, of money and provisions.—How, then, could it be said that such a people was useless to the state? This reasoning prevailed, although the cruelty of the Mongols was atrocious; and such reasons will always oppose the extermination of populous nations, possessed of some civilization.

A nation, that is, a numerous people, may be dispossessed of a large territory. This, however, has rarely happened, and only in the case of savages. It has occurred in America, but not in Hindostan. Where industry exists, the chiefs cannot induce a nation to emigrate in a body; and if conquered by a new tribe, the latter expels a portion to obtain room, if nomadic, but preserves the rest, as slaves, as auxiliaries, or as tributaries. These conclusions are confirmed by history; and M. Abel Remusat has even been able, by comparing language with history, to discover nearly all the nomadic tribes of Asia in their primitive seats, notwithstanding the numerous revolutions and conquests which have occurred in that quarter of the globe."

In applying these principles to practice, Dr. Edwards remarks that, in the nation which we study, we must notice if one or more types exist, and then endeavour to trace them to their origin. The characters which most strongly distinguish a type, are those which are drawn from the proportions of the head and features. A type cannot be correctly ascertained from the examination of an individual. To be satisfactory, many must evince it.

It appears that the greater part of Gaul was occupied by two great families, differing in social state, in language, and in habits—the Gauls and Cimbri. The former were the ancient inhabitants of the country, and are probably most numerous. M. Thierry has placed them in the south-east of France. The Cimbri, the conquerors, and probably inferior in respect to numbers, are chiefly placed by the same author in the north of France, in the Belgium of Cæsar, and in Armorica. Such are the results of the investigations of the historian. Let us turn upon them the observations of the physiologist.

"In travelling through France, Italy, and a part of Switzerland," we are employing the analysis of our phrenological contemporary, "Dr. E. had scarcely reached the frontiers of Burgundy, when he began to observe a union of features which constituted a particular type. This became more marked and frequent as he penetrated into the country, especially from Auxerre to Châlons. He arrived in this latter town on a market-day, and immediately repaired to the market to study the faces of the peasantry from the surrounding country. He was astonished to find a great many of them totally different from those he had first observed, and forming a strong contrast to them. During the rest of his journey in Burgundy, the first type occurred frequently, and continued in the Lyonnais, in Dauphiné, and in Savoy, as far as Mont Cenis. There were in this large district many shades of colour; but, with the exception of the group at Châlons, only one well-marked type of head and face."

That type is as follows:—The head is nearly spherical. The forehead of middling size, somewhat arched, and retreating towards the temples. The eyes are large and open. The nose is nearly straight, and rounded at the point. The chin is likewise round; and the stature is middling. In a word, the head is more round than oval, the features rounded, and the stature middling. This type then occurs in the East and the South-east of France, where M. Thierry, as we have already stated, has placed the original Gauls.

In Tuscany Dr. Edwards found another type, represented by the busts and the pictures of Dante. The physiognomy of that noble poet is peculiar. The head is long, not broad; the forehead high and well-developed; the nose curved, so that the point of it droops whilst its wings are raised; and the chin is prominent.

"Dr. E. saw at Radicofani people who possessed this type, and one of whom was the image of Dante. He had also observed it in the busts of many of the Medici, and other distinguished men of the Republic of Florence; and even traced it in some Etruscan bas-reliefs. He continued to observe it at Bologna, Ferrara, Padua, and the intermediate towns. It was very frequent at Venice. When examining at this last place the picture of a saint painted by one of the Venetian school, the cicerone desired him to observe how much it resembled Dante. In the Ducal Palace he observed that a great majority of the Doges, whose portraits he saw, had the same character.

In proceeding towards Milan, this type became still more frequent, and was sometimes absolutely caricatured. In one village where he stopped for an hour or two, he saw a number of peasants, and could scarcely take his eyes off them, so great was their similarity to those whom he had seen in the market-place at Châlons. Being now in Cisalpine, as he had formerly been in Transalpine Gaul, he naturally concluded that this was a Gaulish type. In crossing the Alps, he met first with a German type, then with a Burgundian, and finally near to and in Geneva, with the type observed at Châlons and in Tuscany. Here, then, was a population composed of two races, each having its own type, and forming a complete contrast to each other. The one observed in Burgundy, Dauphiny, Savoy, and the Valais, having the head more round than oval, and rounded features, with a middling stature. The other, observed in Tuscany, at Geneva, and at Châlons, having the head long, the forehead broad and high, the curved nose, the prominent chin, and a tall stature."

Our readers will suspect, what is the case, that the type thus pursued from the Somme to the Seine, at Châlons and in Tuscany, is no other than that of the victorious Cimbri.

This illustration of the views of Dr. Edwards is sufficient to awake the attention and excite the reflections of those who take an interest in these pleasing, though not conclusive inquiries. It is evident, of course, that demonstration, or even satisfactory proof, is unattainable—that much must depend upon the faith, much on the imagination of the observer—and that all which can result is a theory more or less probable, and more or less ingenious. The dissatisfied historical philosopher may hint, that either the types of nations have multiplied to more than Dr. Edwards' principles admit, or the primitive families of man were more numerous than physiology or theology allows. It is almost certain that modern Europe was peopled by migrations from the North of Asia, and even the reasoning of Dr. Edwards would oppose the propagation of many types in that single quarter. This consideration may, perhaps, be overstretched, yet *if* so many types could be generated in a comparatively limited period, in a limited space, and with a limited population, it is difficult to imagine, or, at all events, to believe, that the mixed and motley breed of Europe, the kennel of all the blood-hounds of the North, should maintain unchanged the features of its savage conquerors.

The Phrenological Editor laments that Dr. Edwards was unacquainted with *his* science, and hopes that the mere physiological observer may be aided by the more profound phrenological philosopher.

## II.

## SPIRIT OF THE FOREIGN PERIODICAL LITERATURE.

### ON THE EMPLOYMENT OF LARGE DOSES OF THE TARTRATE OF ANTIMONY, AFTER SEVERE WOUNDS AND OTHER INJURIES.

M. FRANC, in his prize memoir, has brought together a multitude of cases of severe injury, to demonstrate the salutary effects of this very powerful remedy. The cases have been drawn chiefly from the cliniques of MM. Delpech and Lallemand, in the Montpellier hospitals, and are valuable alike for the accuracy of their histories and the results of their treatment. The medicine was usually given in full doses—8 or 12 grains being dissolved in water, and a fourth part being given every half-hour, till the muscular energy and the arterial and nervous excitement were subdued; and then smaller doses were continued, at greater intervals, to keep up the contra-stimulant effects. Several cases of simple and compound dislocations, in which the reduction was effected with unusual facility, after the exhibition of the tartrate, are mentioned; and, indeed, it was in this class of accidents, and in injuries of the head, that the good effects of the antimonial treatment are chiefly insisted upon. In almost every example, the inflammatory and nervous symptoms were prevented by the timely employment of the tartrate, either with or without the previous abstraction of blood; and even when a train of distressing symptoms had set in before the patient applied for assistance, the relief was uniform and most striking, as soon as the "tolerance" was once fairly established. It is to be observed, however, that, on the whole, this treatment is much more effectual as a preventive than as a curative means.

M. Franc has done a service to his professional brethren, by collecting and arranging the materials of his memoir, for, although the treatment is neither novel nor unknown, we believe that it is not quite so extensively adopted as it ought to be. Many a pound of blood might be saved, if the antimonial antiphlogistic was duly appreciated on all occasions.—*D'Emploi du Tartre, &c. Montpellier*, 1834.

---

### WRETCHED STATE OF MIDWIFERY IN GERMANY.

The heading to this article we have given designedly, and it will probably be justified by our readers when they have perused the following details. The reporter of the case is the celebrated Professor Naegele, of Heidelberg.

Mad. K. aged 30, was delivered of a well-formed boy on the 5th Sept. The placenta was not, as usual, expelled, and the midwife in attendance contented herself with attaching the umbilical cord to one of the patient's thighs!! On the following day a consultation was held (we suppose M. Naegele was present), and it was decided that an attempt should be made to extract the after-birth; but, as it was found to adhere very strongly to the uterus, the attempts were discontinued, and injections of sage and camomile-flowers ordered! Next day, another ineffectual attempt was made, and in the evening of this day, symptoms of peritonitic distress began to develop themselves. On the 8th, being the third day after delivery, the following is the distressing report: "patient much depressed—skin bedewed with an offensive sweat—tongue covered with a thick, brownish crust—pulse rapid and feeble—thighs, hips, and body exhibiting a vesicular eruption, which is attended with sharp pain in the parts—the lochia scanty and extremely fetid. A third attempt was made at extraction, but in vain." Well may the Professor say that the state of his patient was now alarming; however, as good fortune would have it, this woman, after a fortnight's extreme danger, gradually recovered *in spite o* her doctors, who gravely inform us that, "at the end of three months, her health was completely restored, although, during the whole of the time, no traces of the debris of the placenta had been observed in the vaginal discharge." The preceding most worthy history is closed with some sage deductions; for example, we are advised, in cases of abortion in which the placenta is not expelled, not to attempt to extract it with "la pince à faux germe," or any such like instrument, although we have the high authority of Osiander for doing so; and that, after an accouchement, we should not continue groping with our fingers, within the uterus, for every fraction of a fragment of the placenta which we, in our ignorance, may suppose to be left behind!!

It is quite unnecessary to condemn such practice to the British practitioner —the veriest youth, who goes trembling to his "first midwifery case," might give some of his sage seniors, in other countries, a good practical lesson. The preceding case is derived from a late No. of the *Annales Cliniques de Heidelberg.*

### THE VIRTUES OF SARSAPARILLA APPRECIATED IN GERMANY.

It is well known that very different estimates are formed of the medicinal value of this drug by different practitioners in this country, and that, while most surgeons laud it most highly, our physicians seem scarcely to recognize it as a remedy at all. Probably this discrepancy of opinion is attributable to the circumstance of syphilis and syphilitic affections having hitherto been deemed surgical, and not medical diseases! although they may very fairly claim the patronage of the purest Fellow of the College of Physicians, as being truly internal and constitutional in many of their varying forms and phases. The preparation of sarsaparilla chiefly used in Germany, is what is generally known there under the name of decoction of Zittman. There is a strong and a weak decoction—the former is prepared thus:

Take of sarsaparilla-root a pound—pour on it 24 pounds of boiling water, and let the infusion stand for 24 hours; a bag, containing an ounce of sugar, and the same quantity of alum, with half an ounce of calomel, and a drachm of sulphuret of mercury, is to be put into the infusion, and this is to be then slowly boiled down to two-thirds of the original quantity: to the decoction thus obtained, half an ounce of anise and fennel seeds, three ounces of senna leaves, and an ounce and a half of liquorice-root are to be added.

The weak decoction is prepared by boiling six ounces of sarsaparilla in 24 pounds of water, and then adding lemon-peel, canella bark, smaller cardamom-seeds, and liquorice-root, of each three ounces. A fortnight's use of the remedy is, we are told, usually sufficient; but some cases require it to be continued for a much longer period of time. The "diete" ought to be very rigid, and Dr. Chelius, one of the warmest advocates of the medicine, advises the patients to keep their beds constantly while taking it. The physiological effects are, generally, an increase in the perspiratory, alvine, and urinary secretions. Salivation is very seldom induced, however long the decoction be taken.—*Annales de Hecker.*

### EXTRACTS FROM THE GERMAN JOURNALS, WITH SOME REMARKS ON THE CHARACTER OF CONTINENTAL MEDICAL LITERATURE.

#### 1. *Pemphigus often associated with Intermittent Fevers.*

Professor Berndt has related, in Hufeland's Journal for last Nov. several cases of that rare eruptive disease, pemphigus. All the patients had been, and continued to be, subject to attacks of tertian, or other intermittent fever; and, indeed, the cutaneous affection seemed obviously to be dependent upon the same morbid state of the system as that wich gave rise to the ague; for it was recurrent, although irregularly so, and it yielded to the remedies which are known to be most effectual against these, viz. cinchona and arsenic. The bullæ varied much in size in different patients; sometimes they were not larger than a pea, while, at other times, they exceeded the size of a kidney bean.

### 2. *Sulphate of Copper as an Emetic in Croup.*

In the same German Journal, we find a communication in which this cupreous salt is strongly recommended, in the tracheal and bronchitic affections of children.

In the dose of from three to five grains, it acts very speedily as a powerful emetic, and thus promotes the expulsion of any false membrane which may be lining the air passages. The advantage which it possesses over ipecacuan and tartar-emetic is its more prompt and certain operation, without inducing any subsequent exhaustion or profuse evacuation; accidents which are sometimes fatal in very young patients. The employment of the sulphate as an emetic, in the cases referred to, is not, as a matter of course, to be employed to the exclusion of bleeding, calomel, and other means usually adopted in inflammatory diseases.

Before dismissing our German cotemporary, we cannot fail to express our wonder at the many marvellous things which appear to take place in Deutsch-land, and seldom or never in other countries. That faculty of second sense, by which they can often see and hear, when the perceptions of other mortals are laid asleep, is the offspring, we suppose, of their over-active imaginations, or sometimes, perhaps, of that intellectual dreaminess which many experience, when "primed" with the fumes of the Virgina weed; it seems to be an ignis fatuus, which delights to lead them astray from the high road of common observation, and of plain, obvious deduction, into the fens and quagmires of conjecture and of fantastic deception. None can be more willing to bear testimony to the high merits and surpassing excellencies of the Germans, in many respects, than we are; for where do we find such unconquerable perseverance, such unwearied industry, and so ardent a love of science, for science, and not for fortune's sake, as among them? It would seem that Nature is jealous of excessive kindness in the distribution of her intellectual favours, and that it is only on a very scanty few that she bestows the aggregate of them all. There is, as it were, a compensation-system adopted in the general award, so that, where one faculty or set of faculties is developed in an unusual degree, the superiority arising from their excellence is counteracted by the deficiency, or irregularity, of some other faculty or faculties; for example; compare and contrast the mind of a Frenchman with that of a German—what a striking difference! the quickness, alacrity, and light-hearted promptitude, the hop-skipping, grasshopper-like restlessness, the past-forgetting, novelty-attracting, and consistency despising character of the one; and the patient, plodding, laborious hardihood of the other, with his fact-collecting acquisitiveness, burden-oppressed memory, and slow, self-bewildering judgment, oft led astray by his active, shaping ideality, just as a traveller is by the twinkling of a lanthorn-fly in a dark night.

Both of these characters have their advantages and evils; be it our part to cull the former and reject the latter. Few can have greater occasion to be impressed with the importance of this, than those engaged to cater for the English reader from foreign medical literature. Whether our Continental brethren are led to form as unfavourable an opinion of the merits of the British medical journals, as we reluctantly are compelled to form of theirs, we cannot tell; but, with all kindliness of feeling for them, and with an entire freedom from national partiality and prejudice, we hesitate not to affirm, that there is more practical information, more substantial food for the mind, more, in short, of strong, shrewd, every-day good sense in one number of any of our established periodicals, than in the annual series of most of the Continental.

But here we must now stop the vagaries of our pen, and resume our gleaning labours; and, as some may be of opinion that we have been harsh and hasty in our judgment, it may be as well to "shew cause" for it. This is no very difficult task. Perhaps the following report of a case of fatal hydrophobia, from the bite of a healthy and sound dog will satisfy our opponents.

A young countryman was taken suddenly ill; he complained much of a difficulty of swallowing liquids: no other distinct morbid symptom was present. Towards evening he had "un veritable acces de rage;" for observing his sister drink a glass of water, he fell into a violent passion, smashed a looking-glass near him, and besought his attendants to go away, or else he would bite them! This paroxysm lasted for about half an hour, when he fell asleep and dozed quietly for two or three hours. At 10 o'clock he had a second and similar attack; he began to cry, and bark like a dog, and had such an irrepressible desire to be thoroughly "canine," that he run after his aged mother, threw her down on the ground and bit her cheek most severely; and not content with this enormity, he attempted to treat his sisters in the same way; but they (being more alert of limb, we suppose) made their escape from him; he took his revenge, therefore, on the furniture of the room, and broke to pieces every thing which he could lay his hands on. When this "acte de fureur" subsided, he became more rational, and when his family revisited him in the course of half an hour afterwards, they found him dead, "la tete cachée dans les draps." It will no doubt be a satisfaction to the reader to be told, that "sa mere n'eprouva aucun accident par suite de sa morsure."

## SUCCESSFUL LITHOTOMY IN ITALY.

In the course of last Autumn twenty-two cases of the lateral operation were performed by Professor Petrunti, in the Hospital of Incurables, at Naples: of these, nineteen were successful: eight occurred in children under five years of age; nine, from five to fifteen; two, from fifteen to twenty-five; and three, at later periods of life. The three unfortunate cases occurred in men, of 44, 56, and 48 years of age: in the first of these, convulsive symptoms made their appearance soon after the operation, and when they were subdued, a fatal peritonitis followed: the man died on the 14th day. In the second case, the calculus was found to be so large, that the dilatation of the internal wound was necessary; he died on the eighth day, from cystitis. On dissection the neck of the bladder was discovered to be lacerated, and in a sloughy state. The third was similar to the preceding one: the calculus weighed five ounces and two drachms: death from cystitis took place on the eighth day. On dissection, the left kidney was found to be hypertrophied, soft, and beginning to suppurate, and there was moreover an extensive deposition of purulent matter in the right iliac region.—*Annali Universali di Medicina.*

## CASES OF LITHOTOMY AND LITHOTRITY, IN ILLUSTRATION OF M. BLANDIN'S MEMOIR, Reviewed in the present Number.

CASE 1. *Lateral Operation—alarming Hæmorrhage—Ligature of the Internal Pudic—Death.*

The lateral operation was performed after the usual manner, by M. Roux, in the year 1822, and the calculus was readily extracted; but a continual oozing of blood from the wound, after the patient was removed to bed, began speedily to exhaust his strength: the plug was first used, but this was soon found to be of no avail; and as the bleeding orifice was so deep that it could not be seen, M. Roux determined to tie the internal pudic in its course along the edge of the tuberosity of the os ischii. By this bold step, the hæmorrhage was immediately arrested; but symptoms of peritonitis soon afterwards set in, and the patient died. On dissection it was ascertained that the internal pudic itself near the bulb of the urethra had been wounded in the operation; it was situated much nearer the anus than is usually the case.

CASE 2. *High Operation—Extravasation of Urine—Death.*

M. Amussat alludes to the case of a child on whom he had performed the high operation of lithotomy, to extract a calculus which was of an unusually large size, and which was found to be lodged partly within the vesical orifice of the urethra. On the third day, symptoms of a feverish exhaustion set in, and they became gradually more and more alarming. M. A. knew well the irremediable mischief that had taken place. In two days the patient died.

On dissection a most extensive infiltration of urine was discovered to have taken place; for not only was the subperitoneal cellular tissue in the iliac and lumbar regions filled with the fluid, but it had extended upwards as high as the diaphragm.

CASE 3. *Lateral Operation—Vesical Phlebitis—Death.*

A child, three years of age, was lately cut for the stone in the Hospital Beaujon; the calculus was extracted with great ease, and for the next two days every thing went on most favourably; on the third day, however, shiverings, alternating with heats and sweating, and attended with a rapid pulse, great debility, &c. set in. There was but little pain in the hypogastrium, the urine flowed freely from the wound, and the edges of this seemed quite healthy. These unfavourable symptoms resisted every method of treatment; the shivering became more and more frequent, the abdomen tympanitic, the stomach vexed with distressing vomiting, and the vital powers extremely languid: he died on the eighth day.

*Dissection.* The extremity of the bulb had been wounded in the operation; the internal incision had not divided the fascia of the prostate, and none of the large prostatic veins had been opened. The spongy tissue of the bulb contained some fetid purulent matter, and this might be traced along the veins which join the vena dorsalis penis, into the vein itself as far as the symphisis pubis; pus was found also in the superior veins of the prostate gland, and had become infiltrated into the adjacent cellular texture. The parietes of all the affected veins were thickened, opaque, and had their own capillaries of vasa vasorum highly injected. On examining the thorax, nearly a pound of semi-purulent effusion was found within the pleuræ; part of the right lung exhibited numerous patches of lobular engorgement; and in several of these patches, distinct purulent infiltration could be observed, while in others, the structure of the lung was only hepatised; a change, which is well known to be antecedent to the former.

CASE 4. *Bilateral Operation—great difficulty in the Extraction—Recovery.*

A young man, 26 years of age, was operated on at the Hopital Beaujon, in 1828, by M. Blandin, who adopted the bilateral method; the calculus was of considerable size, and of a very irregular shape. So much difficulty was experienced in extracting it, that the prostate gland was dragged fairly out to the outer wound, whenever an attempt was made to withdraw the forceps, and M. B. was obliged to order his assistant to push the gland up, while he continued to make the necessary efforts at extraction.

In spite of the "violence extreme exercée sur la prostate," this patient recovered, without having one unfavourable symptom.

CASE 5. *Lithotomy and Lithotrity—Extraordinary tendency to the Formation of Calculi—Five Operations within Six Years.*

M. Poterlet was in the year 1828, relieved of a calculus by means of lithotrity, performed by MM. Heurteloup and Amussat. No trace of any calculus could be detected after this operation. In the course of two years lithotrity was again performed successfully by M. Amussat. In the following year, another calculus had formed, and the patient himself gave the preference this time to the cutting operation, which was done by M. Amussat. In 1832, lithotrity was performed by MM. Heurteloup and Amussat for the third time; now again (Nov. 1834,) this patient has undergone two séances within the last week; the calculi consist chiefly of the phosphate of lime.

CASE 6. *Lithotomy—two Operations—Perineal Fistula with Calculus—death.*

J. Bertrand, 17 years of age, had undergone lithotomy twice, when admitted into the La Charité Hospital, in 1817, in consequence of a perineal fistula which had remained ever since the second operation. The urine which was thick, muddy, and fetid, escaped partly by the urethra and partly by the wound, and the patient was in a deplorable condition, from the constant dribbling. At times he suffered severe pain at the point of the penis; and after any exercise, it was not unfrequent, that blood was discharged along with the urine.

On introducing a sound along the urethra, M. Roux detected the presence of a calculus so firmly impacted within its vesical extremity, that it could not be dislodged. As it could be felt deep in the perineum, an incision was made directly upon it, but it was found too firmly fixed to be at once removed, and as by the finger introduced into the rectum, it was felt to be of considerable size, the incision was freely enlarged, so that the surface of the calculus was quite exposed: still it could not be seized with the forceps: at length by using the fingers instead of the instrument, the larger portion of the calculus was extracted; this portion consisted of two pieces, one of which was nearly as large as a pigeon's egg, and somewhat resembled in shape a flask, being contracted at one end, while the other, of smaller dimensions, was fitted to the larger end of the former piece, as the astragalus is to the os calcis: the portion which remained behind had been attached to the smaller of the two pieces described; when extracted with the forceps, it was found to be as large as a walnut. On the day following this severe operation, a quantity of purulent matter was discharged by the wound along with the urine: the patient gradually sunk, and he died on the 5th day. During a space of five years he had suffered from almost continual pain, from incontinence of urine, and from a suppurating sore all of which causes must have seriously injured his constitution.

On dissection a quantity of sero-purulent fluid was found within the pleuræ; the mucous coat of the bladder, especially in the neighbourhood of the neck, was indurated and exhibited patches of ulceration.

CASE 1. *Lithotrity, with the Percuteur—Urethra at first extremely irritable—three séances necessary—Cure.*

Count L. aged 62, consulted M. Amussat in January, 1834, in consequence of a slight difficulty which he had experienced for some time past, in making water. On sounding the bladder, the presence of a calculus was immediately ascertained. The introduction of bougies and such like instruments caused at first very considerable irritation, attended with feverish symptoms, and so much swelling of the mucous membrane of the urethra, that M. Amussat was obliged to defer the operation of lithotrity for some time. By using warm baths, and taking mild opiates occasionally, the passage was brought into a less irritable state, and then the gentle introduction of instruments, gradually of a larger and larger size, persisted in daily for several weeks, enabled the patient to undergo the operation.

On the 8th of February, the first séance was submitted to; the instrument was passed into the bladder with facility, the stone seized and broken by the percuteur four different times: on withdrawing the instrument, it was loaded with a yellowish detritus: three or four moderately-sized pieces of the calculus were passed when the patient made water. The patient experienced a few slight pains during the operation which lasted altogether eight minutes. The second séance was held on the 12th; several fragments were successively seized and broken, and the patient experienced less pain on this than on the former occasion: the urine discharged immediately afterwards was not at all tinged with blood, as it had been before. Several fragments were discharged in the stream of the urine during the course of the night. On the 15th the operation was repeated: ten fragments were seized and broken: the sufferings of the patient were still less severe at this séance. For several subsequent days, a considerable quantity of the sandy detritus, and several pieces of calculus were discharged. On sounding the bladder then, M. Amussat satisfied himself that the patient was entirely freed of his disease.

CASE 2.—*Lithotrity with the Percuteur—five séances necessary—Cure.*

A gentleman aged 46, who had suffered from symptoms of calculus since the year 1814, applied to M. Amussat, in Nov. 1833. The first introduction of a large sound was followed by a troublesome nervous fever, which continued for upwards of a week: the bladder and urethra had always been exceedingly irritable in this patient. At the first séance, the calculus was seized and broke into several fragments: no unpleasant symptom was induced; but after each of the three following operations the patient suffered exceedingly; a copious hæmorrhage on one occasion came on, and reduced his strength so much, that the treatment was necessarily protracted for a very considerable time: and what added to the difficulties in the present case, was, that the bladder seemed to have lost much of its expulsive energy, for but little detritus and scarcely any pieces of calculus were dischargad with the urine. A fifth séance was necessary for the entire removal of every portion; and although for three or four days after this the patient experienced severe lumbar and vesical pain, he soon began to recover his strength, and in the course of a week or two, he found himself altogether better and more comfortable than he had been for the preceding twenty-years; he could now walk and take considerable exercise even on horseback, without suffering any distress.

CASE 3. *Lithotrity by means of the "Brise-pierre,"—one Séance—Cure.*

A middle-aged man was recommended by Professor Dubois to the care of M. Amussat, for the purpose of relieving him from a urinary complaint. This patient had a few days previously passed a calculus of the size of a cherry-pip: the canal was therefore in a favourable condition for the introduction of the necessary instruments: these were introduced for several days successively in order to dilate the urethra still more. The operation with the "brise-pierre" was performed with great ease, and with so little distress to the petient, that he had believed that M. Amussat, was merely sounding his bladder. "If," says the narrator, "we had to do only with such cases, lithotrity would scarcely deserve to be styled an operation."

CASE 4. *Lithotrity—Inflammation of the Bladder—Death.*

M. P. applied to M. ——, in consequence of suffering much from a urinary complaint. A stone was detected on sounding the bladder, and he was recommended to have the operation of lithotrity performed. Several attempts were made by the surgeon to lay hold of the calculus with the "brise-pierre," but these were unsuccessful, and unfortunately they could not be again repeated, for symptoms of crystitis came on, and in 15 days the poor patient was dead.

[It is to be regretted that the details of this case are so meagre; it is not even stated whether the operation was performed lately or several years ago, when it was still imperfect and faulty.]

To the preceding case we may add, that in one instance, reported in Baron Larrey's *R*eport on M. Civiale's cases, the patient, "tomba dans les accidens nerveux si graves," after the first séance of lithotrity, that he died on the third day subsequently.

CASE 5. *Lithotrity—the attempt unsuccessful—Death on the fourth day.*

A young man, 17 years of age, was admitted into the Hopital Beaujon in 1828, with a calculus in the bladder. M. Blandin made an attempt to seize it with the forceps "à trois branches," but he was unsuccessful: in the course of a few days, a second equally fruitless attempt was made; and on this occasion the patient suffered considerably more pain. On the following day the patient experienced pain in the renal and in the hypogastric regions, frequent desires to make urine, &c.; these symptoms were attended with general pyrexial irritation. The pain and fever increased, the scrotum became retracted, and almost continual retching and vomiting supervened. He died on the evening of the fourth day.

*Dissection.* On examining the bladder, its mucous surface, especially of the cervix, was very highly injected; the ureters were dilated, and exhibited a livid red colour on their inner surface; the urethra was perfectly sound; the kidneys were larger than natural, and indicated a tendency to ramollisement of their structure.

The calculus within the bladder was of the size of a walnut.

CASE 6. *Lithotrity forbidden by excessive Irritability of the Urinary passages.*

M. Marmot, 60 years of age, had laboured under the symptoms of calculus for three years, when he applied to M. Blandin; the bladder had always been excessively irritable, and the constitution of the patient was highly nervous: indeed so alarmed had he been about his malady, that he would not submit for a long time to being sounded; and, when he did, the examination was so unsatisfactory that M. B. could not ascertain any thing beyond the mere presence of a stone; he could not form any idea of its size, of the capacity of the bladder, and so forth. Several subsequent attempts were made to accustom the urethra and bladder to the contact of instruments; but these were all fruitless; and indeed on one occasion, disagreeable feverish symptoms, and very considerable strangury was induced; and the patient continued in this unpleasant state for several months; all idea therefore of any operation was abandoned, and M. M. still retains his malady.

CASE 7. *Lithotrity—Abscess in the Prostate—Six Séances necessary—Cure.*

M. D., 71 years of age, after having suffered from calculous symptoms, consulted M. Blandin in 1829. At the first séance the calculus was broken into several pieces; the bladder was so strongly contracted that it would not receive more than an ounce of injection, and even this small quantity was almost immediately rejected. After the second séance, when considerable difficulty was experienced in introducing the straight forceps, there occurred a retention of urine, occasioned by an abscess having formed in the prostate gland. The introduction of a catheter to draw off the urine, was attended with extreme difficulty; but at length a small sound was passed. A month was allowed to elapse, before any further attempt was made on the calculus. The progress of the case was very tedious, as the bladder had not the power of expelling its contents, and the debris of the calculus was therefore voided only through the catheter; and this instrument required to be used during the whole time. After six séances (in all) no traces of a calculus could be detected. In half a year after this date, M. D. again experienced all his former symptoms, and it was then ascertained that another calculus had been formed. He submitted to a "nouvelle application du broiement, et l'extraction artificielle de fragmens de pierre," which was much less hard than the former calculus; the one being composed of the ammoniaco-magnesian phosphate, and the other of uric acid. It is two years since the date of the last operation of lithotrity, and the retention of the urine still continues. The bladder seems to have become paralytic.

CASE 8. *Lithotrity—Three Séances. Attempt ineffectual—Lithotomy—Death.*

M. Rousseau having long laboured under great distress from urinary calculus, consulted M. Civiale

At the first séance the stone was seized, but not without some difficulty, and submitted to the operation of the "foret:" the three following séances were "tout a fait infructueuses," for the calculus could never be fairly embraced by the forceps. The patient now applied to M. Leroy, who found on examination that the calculus was about twenty lines in its longest diameter, while its antero-posterior diameter was comparatively very small; that the bladder was hypertrophied and excessively contracted; that the prostate was greatly swollen, and that the neck of the bladder formed a sort of long and narrow "vestibule."

These circumstances determined M. L. to decline performing any lithotritic operation; but the patient insisting upon one attempt more being made, he was recommended to use opiate injections into the bladder for some time before any instruments were introduced. Unfortunately this treatment seemed to produce but little benefit, and M. Leroy was therefore obliged to hazard the operation much against his own will. The bladder was found to be so very irritable, that it would not retain above an ounce of fluid, and even the extremity of the catheter was so firmly grasped by the contracting viscus, that "on ne pouvait lui imprimer aucun mouvement;" M. L. waited some time, with the view of giving time to the spasm to relax, as it usually does; but it, as well as the pain, rather increased than otherwise; he therefore closed the branches of the instrument with the greatest possible caution, to avoid injuring the coats of the bladder, and slowly withdrew it. A large dose of opium was administered, and the patient kept quiet for several days. At the following séance M. Heurteloup assisted. He recommended a trial of the forceps "a quartre branches mobiles independantes," or, as it has been called, "evideur à forceps;" but the stone could not be seized, for it was retained in the "bas fond" of the bladder by the prostate, and therefore lay below the reach of the instrument. Neither injections, nor the "pince servante," nor "la bascule" of the rectangular bed were of any avail in displacing the calculus from its position. Another trial was made a few days afterwards, and on this occasion M. Heurteloup succeeded in grasping the calculus, but by no means advantageously, for it was not sufficiently embraced by the branches of the forceps, to permit the "evideur" to act with much power. At a third séance, but very little progress was made, and the patient on this, as indeed on the two former occasions, suffered extreme pain.

It was now decided that lithotrity must be abandoned, and the lateral operation of lithotomy was performed by M. Hervez de Chegoin. When the internal incision was made, a stream of purulent matter flowed out of the wound, and it was found that this had escaped from an abscess in the prostate, which had recently formed, and had caused extreme suffering for several days to the patient. Unfortunately, the pain did not cease after the extraction of the calculus, but continued with great severity, until the death of this patient, who sank exhausted on the twelfth day.

On dissection, the prostate was found to have attained the size of an orange; the parietes of the bladder to be nearly a quarter of an inch thick, and its cervix to be at least an inch and a half in length. The calculus was of a long ovoid form, and exhibited one perforation "legerement excavée." We may therefore suppose that the "foret" of M. Heurteloup had entered the pit which had been previously made by M. Civiale.

Case 9. *Lithotrity—Three Séances—Impaction of a Fragment in the Urethra—Death.*

A man, about thirty years of age, had, under the influence of one of those strange mental aberrations of which the genital organs are often alike the cause and the object, introduced the stalk of a long grass into his urethra;—the end of it having broken off, slipped into the bladder, and there had become the nucleus of a stone. The patient entered the Hôtel Dieu, and M. M. Dupuytren and Breschet, considering the case as well suited for lithotrity, entrusted it to M. Blandin.

The sound detected the presence of several calculi in the bladder; two of them were readily seized and crushed with the forceps and drill; a third, being much harder, required the use of the bow. While M. B. was using this, the patient on a sudden made a violent struggle, and shrunk back so much from the instrument, that its extremity was drawn within the urethra. Fortunately, by this time, the calculus had been crushed, and the blades were already closed, else the neck of the bladder must inevitably have been lacerated. M. Blandin candidly confesses that he had omitted to secure the body of the patient with the shoulder-straps.

Two other séances were successively undergone, and several calculi crushed and discharged: but unluckily a fragment of one larger than the rest became impacted in the membranous portion of the urethra, and could not be dislodged; and although it did not much obstruct the passage of the urine, it prevented the introduction of any instrument into the bladder. Things continued in this state for several days, when the patient, upon leaving a warm-bath, caught cold, and was seized with a violent pneumonia, which speedily proved fatal. On dissection, the calculus was found in the membranous portion of the urethra, which, as well as the prostatic portion, had become much inflamed. The adjacent veins were found to contain pus. Numerous small abscesses were disseminated through the substance of both lungs. A score, at least, of small calculi were found in the bladder.

[This case we have already reported in our review of M. Blandin's Essay. We have thought it right to reproduce it here with the other cases, in order that the catalogue may be more complete, and thus furnish at a coup d'œil examples of the most frequent and important dangers of lithotrity.—*Rev.*]

CASE 10. *Lithotrity unsuccessful—Recto-vesical fistula—Lithotrity—Cure.*

M. Turgot, who had undergone several séances, but in whom the calculus could not be effectually removed by lithotrity, applied to M. Dupuytren, who advised him to be cut. The operation was performed, and this patient was relieved not only of the calculus, but also of a recto-vesical fistula: (the origin and date of the fistula are not stated.)

CASE 11. *Lithotrity—End of one of the Instruments broken off in the Bladder—Twenty Séances—Cure.*

M. F., aged 72, had laboured under symptoms of stone in the bladder for a period of five years, when he applied to M. Heurteloup. The Baron operated with the forceps "à trois branches droites" four different times. Being then called away to London, he entrusted his patient to M. Leroy's care, who discovered in the bladder a number of soft calculi, the detritus of which, when deposited, resembled mortar.—This species of calculus very generally indicates an unhealthy condition of the urinary passages, and in this patient there existed an incomplete retention of urine. The case was therefore by no means a favourable one. After every séance it was found necessary to discharge the fragments, and debris of the calculi by means of injections, and of the "sonde evacuatrice." Several pieces which were detained "dans les yeux de cette sonde" were crushed, and then voided in powder. Twenty séances in all were undergone by M. F. before he was declared cured of his malady. He also got rid of the strangury at the same time. An accident occurred at one ef the séances, which deserves to be mentioned. While M. Leroy was in the act of drawing back the "foret" or perforator within the blades of the forceps, its extremity broke off, and was left behind in the bladder. The patient was quite ignorant of what had taken place, and was so little discomposed by the séance, that he walked home without any distress. M. Leroy hoped that the fragment might become admitted in the apertures of the "sonde evacuatrice" and be removed in this way; but not so. Several times it was laid hold of with the forceps, and it was easy to distinguish it from the calculus by the sound which it gave out when struck with the perforator. When nearly all the calculi were got rid of, M. Leroy was then fortunate enough to extract the broken-off end of the instrument by means of the ordinary forceps " a trois branches."

We may add that M. Hervez de Chegoin lately extracted by lithotomy a portion of a litholabe, which had been broken off by accident in the bladder.

CASE 12. *Lithotrity—Thirty Séænces—Cure.*

In 1829. M. Leroy was consulted by an officer, with the view of having a urinary calculus removed by lithotrity. The calculus was a large one, measuring upwards of two inches in its long diameter, and it was rough and irregular on its surface. The patient was informed that the treatment would necessarily be very tedious. The bladder being easily dilatable, no difficulty was experienced in seizing the calculus, and attacking it with the "foret à ailes." The progress which was made at this and at a second sèance was very little; and M. Leroy, therefore, determined to use "les ailes du foret" to break the calculus in pieces. Some of the fragments were then reduced "par eclatement," and others were crushed.—Thirty séances in all were necessary, before every fragment was quite removed.

CASE 13. *Lithotrity—Ten Séances—Cure.*

M. Alexis was a patient of M. Leroy. The calculus was ascertained to measure rather more than an inch and a half lengthways. The bladder was in a favourable condition. At the first séance the calculus was broken in pieces, "par eclatement," after having been perforated. By other nine séances the bladder was freed from any vestige of a fragment, and the patient restored to perfect health.

CASE 14. *Lithotrity impracticable, in consequence of the flattened Shape of the Calculus.*

A gentleman who had for many years suffered great distress from a urinary calculus, but who was unwilling to submit to any cutting operation, applied to M. Leroy to have lithotrity performed. M. L. found on examination that the calculus was of a large size, and moreover that it was so flattened in its shape, that it repeatedly slipped from the forceps, after being seized:—he therefore advised his patient to submit to lithotomy. The stone was extracted without difficulty, but the patient died on the third day.

CASE 15. *Lithotrity impracticable, in consequence of the flattened shape of the Calculus—Lithotomy—Death.*

A gentleman, 40 years of age, applied, in 1830, to M. Leroy for relief from a urinary calculus, which had distressed him for many years. The bladder was hypertrophied, and could not hold much more than a wine-glassful of fluid. The desire to pass water was therefore most troublesomely frequent; the prostate gland was rather enlarged; the calculus was pronounced to be of a flattened shape, and to measure lengthways about 16 or 18 lines. The cirsumstances of the case were not favorable for the success of lithotrity, nevertheless it was attempted.

At the first séance the stone was seized with the forceps "a trois branches" and then attacked with the perforator, provided with "ailes articulées," so as to craunch it down from before backwards; but as the calculus presented its thin edge, on which the "ailes" caught, and the perforator could not move easily, M. Leroy therefore contented himself with making a simple perforation at this séance. The attempt was renewed a few days aftewards, but the bladder was found to be so exceedingly irritable, that no instrument could with safety be moved about in the bladder. The dysuria was aggravated in consequence for upwards of a week. Ltihotrity was therefore abandoned as scarcely practicable, and the patient was cut by M. Bouchet, who extracted two flattened calculi. Death happened on the 8th day.

CASE 16. *Lithotrity successful on two occasions.*

M. G. aged 70, applied in 1829 to M. Lisfranc, who detected the presence of a calculus in the bladder. This patient had for many years been subject to attacks of retention of urine, and this secretion was usually turbid, and loaded with mucosity.

In spite of these unfavourable circumstances, it was determined by MM. Lisfranc and Leroy to attempt the destruction of the stone by " le broiement" with the forceps "a trois branches, munie d'un foret à developpement." The calculus being rather soft and friable, was entirely removed at the ninth séance. Six months after this date, another calculus had formed; the patient, in the mean time, having enjoyed very good health, with the exception of the retention of urine, which had so long troubled him.

M. Leroy repeated his lithotritic operations, and again freed M. G. from all traces of a calculus, which, it deserves to be noticed, belonged to the ammoniaco-magnesia phosphate class.

CASE 17. *Lithotrity in a Girl, three years of age.*

This child had suffered from the symptoms of urinary calculus for twenty months. She had been repeatedly sounded by different surgeons, but no calculus had been found.

M. Segalas, however, was at length so fortunate as to satisfy himself of its presence in the bladder, and he determined to attempt its removal by lithotrity.

Six séances were necessary for its entire destruction and discharge.

M. Civiale relates a case of successful lithotrity which he performed on a boy 13 years of age.

---

## ON HÆMORRHOIDS AND PROLAPSUS OF THE RECTUM.

CASE 1. *Severe Pains experienced only during Coition—Disease of the Uterus suspected—Cure.*

It is by no means an unfrequent occurrence in hospital practice to find women who are labouring under hæmorrhoidal affections, and who are ignorant all the while that these very affections are merely secondary, and are dependent upon some disease of the uterus, or of the vagina. On the other hand, experienced surgeons are well aware, that a uterine or vaginal disease may be most perplexingly simulated by internal hæmorrhoids, as is proved by the following case:—

A woman 23 years of age, complained that she had always suffered severe pain during coition. The husband, finding that month after month passed away, and yet that things were nowise better, became discontented and suspicious of the affections of his wife; he applied therefore to a midwife to examine her; but she could not discover any cause why the lady should be more unfortunate than others of her sex. In consequence of this a physician was applied to, and when he was informed that the pains were experienced only during connexion, he proposed a manual examination, and thus ascertained, that through the posterior wall of the vagina several turberculous masses might be felt. The patient now confessed that for a length of time she had occasionally experienced annoyance at stool, and that blood was sometimes discharged with the evacuations: that this hæmorrhage usually afforded her considerable relief, so that she could then permit her husband's approaches with less suffering.

By appropriate treatment, directed chiefly to the relief of the rectum, this woman got rid of all her distress, and soon afterwards became pregnant.

CASE 2. *Disease of the Rectum mistaken for Scirrhus of the Uterus.*

Mad. G. had been always regular until she reached the age of 44, at which time a tedious hæmorrhoidal flux supervened, and the catamenia gradually ceased some months afterwards. This lady began to experience a sense of weight and uneasiness in the perineum, and then sharp and lancinating pains within the vagina, shooting up to the region of the uterus. The physicians first consulted considered the case as one of incipient carcinoma of the uterus; but as no amendment was afforded, M. Lepelletier was applied to. Upon carefully examining per vaginam, he could not trace any sign of disease of the uterus, and the only lesion which he could detect was an induration at the superior and posterior wall of the vagina. He now examined the rectum, and discovered, high up, that there were several painful, ulcerated, hæmorrhodial swellings, and also that this surface of the recto-vaginal septum had become thickened and scirrhous. Only temporary relief could be promised in such a case; the patient died in 15 months after M. L. first attended her.

Case 3.—*Influence of the Catamenial and Hæmorrhoidal Fluxes in Phthisis Pulmonalis.*

A young lady had, previous to the first appearance of the catamenia, all the symptoms of approaching phthisis pulmonalis, and even although these symptoms almost entirely ceased after menstruation had become established, her physician regarded her as in a very precarious state, for the lungs were, in his opinion, decidedly tuberculated. The lady, however, enjoyed very tolerable health up to her forty-fifth year, at which period the catamenial flow began to cease, and her pulmonary complaints to re-appear. Fortunately, a vicarious hæmorrhage from the rectum supervened, and again the chest affection abated; the hæmorrhoidal discharge continued (periodically, we suppose) year after year, till the patient attained her 65th year—it then ceased, and soon afterwards she died of confirmed phthisis.

Case 4.—*Prolapsus of the Rectum, treated with the Actual Cautery.*

A young man, 22 years of age, had laboured under a prolapsus of the rectum for upwards of a year; it gave him great pain, and induced a most distressing tenesmus, and not unfrequently troublesome hæmorrhage. The gut could be reduced, but not retained when up.

A variety of means had been tried in vain; recourse was, therefore made to the actual cautery. It was applied once a week to the whole surface of the exposed gut; the swelling gradually abated, and the hæmorrhage and tenesmus became less and less troublesome. The intestine shrunk up in course of time, the ulcerated surface healed, and the patient was entirely cured of his very distressing malady in about two months from the first application of the cautery. No return of the disease took place subsequently.

Case 5.—*Prolapsus of the Rectum, treated with Caustic Ligatures.*

A man, 72 years of age, had for several years laboured under a prolapsus of the rectum which had become as large and bulky as the worst case of prolapsed uterus. Boyer, whose patient he was, dreaded an alarming hæmorrhage from excising the protruded gut, and he determined, therefore, to surround its base with a ligature of several cotton threads, previously wetted with caustic potass. On the morrow, he made an incision through the circular eschar thus produced, and then applied a ligature of several silk threads, well waxed and tightened it more and more for several days successively. Considerable constitutional disturbance ensued. On the fourth day, the ligatures were found to have worked their way to nearly an inch in depth through the substance of the prolapsed mass; Boyer, therefore, with one sweep of the scalpel excised it all. Several arteries required ligatures, and a plug was likewise introduced into the rectum, to keep up a steady pressure for some time.

Case 6—*Prolapsus cured by the Excision of several Folds of the Integuments round the Anus.*

A young and healthy woman was admitted into the Hôtel Dieu, for relief from a troublesome protrusion of the rectum; it was not complicated with any hæmorrhoidal affection, nor, indeed, was it always induced by the usual cause—straining at stool; for sometimes she would not be annoyed with it for two and three weeks, and then it would recur without any very apparent cause. But this occasional distress, and the almost constant discharge of a bloody mucus from the anus, were grievances sufficient to induce her to submit to an operation. M. Dupuytren excised four folds of the integument without, and of the mucous coat within, the anus, and applied simple dressings to the wounds. In a few days, this patient was completely relieved of her malady.

The preceding six cases are extracted from M. Lepelletier's Concours Essay.

### CASE 7.—*Prolapsus of the Rectum cured by the Application of the Actual Cautery.*

A. M. aged 50, was admitted into the hospital at Gand, in consequence of an old and troublesome prolapsus. It was as large as a large apple, and its mucous surface was swollen, irregular, hard, and almost callous.

Three cauteries, heated to whiteness, were successively applied to the mass, and Professor Kluyskens, not satisfied with this, introduced one of them into the anal orifice, so as fairly to touch every portion of the protruded gut, and reduce it to an eschar; simple dressing was then applied, and kept it in its place by a T bandage. The pain produced by the cauteries was only temporary: the bowels were kept gently open, and the patient recovered without having experienced one unfavourable symptom. When he left the hospital, there was not the slightest tendency to prolapsus.

The operation, in the preceding case, may be deemed by some surgeons to have been too severe, and they may suppose that Dupuytren's mode of excising three or four folds of the integuments round the anus, might have succeeded perfectly; but let them remember, that the protruded mass was much changed from its normal structure, and even if it could have been kept up within the sphincter, this was not to be desired. We admit that Dupuytren's operation is sufficient for most recent cases. For many years, Prof. Kluyskens has been in the habit of using the actual cautery to prolapsus of the rectum, and almost invariably with perfect success; the pain is by no means so severe as might be imagined, and the danger of consecutive accidents may be averted by judicious treatment.—*L'Observateur Medical Belge.*

---

### SOLANINE IN POTATOES—POISONING FROM MUSHROOMS.

Several accidents among the cattle which had been fed with the residue of the potatoes (in a state of germination) used in the preparation of brandy, having occurred lately at Brunswick, M. Otto was induced to perform some experiments.

He treated the germs with water, slightly acidulated with sulphuric acid —then added the acetate of lead to precipitate the acid, and filtered the liquor; to this liquor lime was added, and the precipitate thus obtained was treated with boiling alcohol, which dissolves the solanine; the alchaloid may then be purified by repeated solutions and crystallizations. One grain of the solanine killed a rabbit in six hours—and three grains a dog in nine hours.

In the same periodical, we observe the history of four individuals having died from eating mushrooms. The species of agaricus which had been eaten were ascertained by M. Brogniart to be a. grammapodius—a. infundibuliformis —a. fusipes, and a. pectinaceus of Bulliard (Emeticus, of Persoon, and Integer, of Sowerby.)

The three first species are usually considered innocuous; but the last is very poisonous. It is an interesting problem in organic chemistry, to discover the noxious pripciple of the agarici; hitherto, it has escaped the tests of the analyst.—*Journal de Chimie.*

---

### ON CUTANEOUS DISEASES.

In our last No. we gave an ample analysis of M. Rayer's treatise on the diseases of the skin, and we then commented freely on what we considered to be the errors of his arrangement, and the defects of the French school in general, on this subject of medical inquiry. Our readers will find that we gave the preference to the standard works of our own countrymen, Drs. Willan and Bateman, not only because they are of a more practical character, but because the arrangement adopted, though imperfect, and not unfrequently faulty, is less hypothetical, and of more easy application. It is always gratifying to us to find our opinions on foreign authors coinciding with, and, therefore, confirmed by, the judgment of others, and more especially of the author's own countrymen: such is the case in the present instance. M. Gibert, educated for many years under M. Biett, one of the ablest dermatologists of France, and now "Professor of Cutaneous Pathology" at Paris, has recently published a manual on skin diseases, wherein he candidly and unhesitatingly decides in favour of Willan's system, over any one proposed subsequently, either in France or elsewhere. He makes eight orders, according to the appearances and external characters of the eruptions; he very properly (from a manual) excludes from each order those diseases which have always been considered to belong to the domain of general pathology, such as erysipelas, and also those which are usually treated of in separate works, or monographs, as variola, vaccinia, &c. and, in place of these, he has appended to each order the cognate or correlative eruption, induced by the syphilitic poison; for it is well known that the cutaneous diseases arising from this prolific source, exhibit almost every variety of cutaneous exanthema, retaining, however, some common characters and family resemblances, which indicate their parentage.

It is, therefore, not without good reason, that M. Gibert has devoted a chapter, at the close of his work, to a general resumé and grouping together of the different syphilitic eruptions, whose special and particular characters have been described in their proper places.

As a specimen of M. Gibert's treatise, we shall extract a sentence or two.

"In the English arrangement, the term 'lepra' has a meaning very different from that which is affixed to it by medical men in other countries: it is not applied to that dreadful and hideous disease, which is often fatal, and almost always incurable, but to a mere scaly eruption, which, in most cases, is of easy removal; the former belongs properly to the order 'tubercula, and is the 'lèpre tuberculeuse' of Alibert, but we shall describe it under its true name, elephantiasis of the Greeks—whereas the latter belongs to the 'maladies dartreuses ordinaires' (would that the 'word' dartre were banished, as an outcast from medicine), and is the herpes furfuraceous circinatus of Alibert. For our part, we have no hesitation in adopting the sentiments of the English physician in preference to those of our own countrymen; and we are of opinion, that the terms 'psoriasis' and 'lepra' should be restricted to cutaneous affections of a scaly or squamous character; indeed these two diseases ought not, perhaps, to be separated at all, for they differ from each other only in the shape of the patches, and not in any essential particulars."—*Manuel des Maladies Spéciales de la Peau. Par C. M. Gibert. Paris*, 1834.

---

## ENDERMIC USE OF DIGITALIS IN DROPSY.

The narrator of the following cases assures the profession, that he has been in the habit of employing digitalis, in the endermic method, for the last 20 years, with the most gratifying success.

CASE 1.—*Anasarca and Acites—Frictions on the Abdomen with the fresh Herb—Cure.*

A countryman became the subject of dropsical effusion into the abdomen and subcutaneous cellular membrane, on the disappearance of a "dartrous" affection of the skin with which he had been troubled for some time. The usual diuretic remedies having been tried without effect, the physician had recommended that the limbs should be scarified, and that paracentesis abdominis should be performed; but fortunately, having heard of the good effects of digitalis, used endermically, he resolved to make a trial of the remedy. The fresh herb was well beaten, and blended with some gastric juice, and this mixture was rubbed powerfully on the abdomen. By the fourth friction, the urine had begun to flow so very abundantly, that the patient, fatigued with rising from bed every minute, "prit le parti de s'asseoir sur le bord du lit, de mettre les pieds sur des chaises, une chaudron à terre." In the course of one night, the abdomen had greatly diminished in size; the diuresis was kept up, though not to the same extent, for several days, and, within 10 days, the patient was completely relieved of every dropsical symptom.

CASE 2.—*Anasarca after Scarlatina—Frictions with the Tincture—Cure.*

A child five years of age, while recovering from an attack of scarlatina, became affected with ascites. Frictions were ordered to be made on the abdomen, and inside of the thighs, three times a day, with half an ounce of the tincture of digitalis. In three days, the flow of urine had greatly increased, and the dropsical effusion was very visibly diminished; the frictions were then used only twice a day, and this treatment continued for about a week—the cure was complete.

CASE 3—*Ascites—Frictions with the Tincture—Cure.*

A labouring man, much addicted to the abuse of spirits, consulted M. Chretien in consequence of dropsy of the belly, under which he had laboured for some time. No internal medicines were prescribed, and the only remedy was the rubbing in, three times a day, of half an ounce of the tincture of digitalis on the abdomen, and on the inside of the thighs. At the same time, the patient was recommended to abandon the use of ardent spirits. The quantity of the tincture was gradually increased to two ounces per diem. The abdominal effusion very speedily began to diminish, and at the end of a fortnight, was quite absorbed.

Twenty ounces, in all, of the tincture were used.

CASE 4.—*General Dropsy—Frictions with the Tincture, in Conjunction with Internal Remedies—Cure.*

Dr. Chretien was called to a man, whom he found in so advanced a state of general dropsy, that he considered that it would not be safe to have recourse at once to the digitalis. He ordered a stomachic strengthening wine, and small doses of subcarbonate of iron, with infusion of rhubarb (a combination which, the Doctor tells us, he very highly recommends in debilitated states of the system.) In the present case, however, no benefit was derived from its use, and frictions with the tincture of digitalis were accordingly commenced, in conjunction with the above internal remedies. In the course of a few days, the alvine and urinary secretions were much increased—the breathing, which had hitherto been greatly distressed, was easier, and the distention of the abdomen was very sensibly diminished; the anasarca of the extremities and of the scrotum was still very considerable.

In order to ascertain whether the cure would proceed without the internal means being adopted, they were discontinued for a few days; but, as the state of the patient became decidedly worse, recourse was again had to the infusion of rhubarb, with what the French call "safran aperitif de Mars." It required perseverance in the treatment which we have explained for nearly four months, to effect the perfect recovery of this patient.

CASE 5.—*Ascites—internal and external Use of Digitalis—Cure.*

A woman, who had laboured for some years under cough and dyspnœa, became dropsical; the urinary secretion was remarkably deficient, scarcely more than a wine-glassful being discharged in 24 hours.

Pills, consisting of digitalis and of assafœtida, were ordered to be taken three times a day, and the tincture of digitalis was to be well rubbed in upon the abdomen. In the course of a few days after beginning the use of these remedies, the flow of the urine was so abundant, that the patient was obliged to get out of bed almost every hour; the general health became also, at the same time, much better, and, in the course of a month, every unpleasant symptom was entirely removed.

*Observations.* The tincture which was employed in the preceding cases was stronger than that in common use; it was prepared by digesting an ounce of the leaves of the herb in three ounces of alcohol. If the experience of other practitioners should confirm that of Dr. Chretien, the endermic method of exhibiting digitalis will be a most valuable improvement in the mode of treating many cases of dropsy. The reports of his cases are certainly far too brief, and too carelessly drawn out, to satisfy the mind of the critical reader. No allusion is made to the state of the pulse during the continuance of the remedy; but we are led to infer, from the subsequent remarks of the author, that it was always lowered, when administered internally, and that no sensible effect was produced upon it by the external use of the medicine. It has been maintained by Broussais, and other physicians of the physiological school, that the direct and normal action of digitalis is a sedative to the circulatory system, and that, whenever the pulse becomes quickened, or, indeed, is not reduced by its use, we may conclude that some gastric irritation exists in our patient; in order that the drug may be able to exert its natural action, the stomach must be in a tranquil state. The experiments which Dr. W. Hutchinson instituted upon himself are the most satisfactory and conclusive, as to the operation of digitalis on the human body, and they certainly confirm the doctrine of Broussais; the pulse was gradually more and more lowered as the medicine was continued, and its dose increased, until it beat only 28 times in the minute; and a gastro-intestinal irritation, accompanied with extreme exhaustion, having then come on, the contractions of the heart bacame strong and vigorous, and were upwards of a hundred. It is to be remembered, that this experiment was repeated, and the same results exactly were obtained as on the first occasion.—*Révue Médicale.*

---

## STRICTURES ON THE BROUSSAIAN METHOD OF INVESTIGATING DISEASES.

The physiological, or as it ought rather to be called, the pathological system of nosology, which has been so fashionable, especially in France, for the last five and twenty years, is, like all exclusive doctrines, beginning to lose somewhat of its ascendancy. Some, indeed, of the best physicians of Paris have, ever since its birth, been its inveterate enemies, and, clinging to the old order of things with all the pertinacity of devotees, have, through good and through bad report, exerted themselves to shew the extravagances of the modern anatomists. When we mention the names of Recamier, Bayle, Cayol, Gibert, and Martinet, as disciples of what they themselves call "the Hippocratic school of medicine," our readers will be satisfied that we have not misapplied the expression—"some of the best;" and, perhaps, we should not be far wrong, if we were to extend the list, and to enumerate among these the very man, who, perhaps, of all others, has exalted and promoted the science of pathological anatomy in the present century—we mean M. Andral; for, although no one has done so much, and written so well on the subject, yet it is very generally known that he is not "a physiological physician" in his treatment of diseases; he does not, like the Doctor of the Val de Grace, insist that every malady, to which our bodies are subject, is invariably associated with, if not absolutely dependent upon some lesion of tissue or structure which is, or ought to be, appreciable on dissection to the senses; or that this lesion is, in almost all cases, an inflammation, or something like it; and that, when not discoverable by dissection, we may be nevertheless assured, that it did exist during life, and has only been effaced during the agonies of death, or immediately afterwards. No; M. Andral is far too enlightened a philosopher to addict himself to any such absurdities, for well he knows that the animal body is too complicated a machine, and that it is acted upon by too many powers, both from within and from without, to be subjected to one lesion, or one set of lesions only. Of a kindred mind is M. Lobstein, the professor of pathological anatomy in the school of Strasbourg, and the author of a very able treatise on this subject. It has been the perusal of this treatise that has suggested the preceding remark; and when we find that those who write best on the all-absorbing topic of the so-called physiological physicians, and who yet do not adopt their dogmas in practice, a strong presumption is naturally suggested that, just in proportion as we become more and more intimately acquainted with the details of morbid anatomy, so do we become less and less confident in our explanations of the proximate causes of diseases. We have not made any allusion to that shining light of English pathology, the late Dr. Matthew Baillie, who is justly admitted by all to have been a consummate anatomist, and, withal, one of the most modest of nosologists: he looked at Nature as she presented herself to his view; he did not presume to dictate to her, nor yet to guess and conjecture at those mysteries which she has put beyond the ken of human faculties; but with the mind of a true philosopher, kept his way between the phantasies of the mere dreamers on the one hand, and the audacious arrogance of the dissecting materialists on the other.

But it is time to recur to our author. In one respect M. Lobstein differs most materially from most modern anatomo-pathologists, in attributing a mighty influence in the generation and development of organic lesions to the nervous system, and to the varying states of the animal fluids. To some depravation or another of the functions of the one, or of the qualities of the other, many diseases, such as fluxions, congestions, inflammations, &c. are in their first workings attributable. M. Lobstein perhaps carries his ideas of the operation of the nervous system too far, and almost touches upon the domain of the old chemical philosophers, who were so apt to try to solve many of the enigmas of life by referring them to an archæus, or presiding animus. In one passage he has these words: "if in a physical science it were permitted to employ allegorical images, and to personify the conceptions of our minds, I should say that the nervous influence holds in subjection the universality of the humoral system, and rules it with an absolute power."

And again: "The hypothesis that there exists a peculiar principle, 'd'une matiere imponderable, elaborée par les nerfs, qui en sont en meme temps, les conducteurs,' seems to me very probable; and I suspect that this principle or agent is generated in the pulp of the brain, spinal marrow, nerves, and ganglia."

It is certainly of importance to distinguish well those symptoms of a disease which precede any appreciable alteration of texture, and which may be called "symptomata proegomena," from those which follow, and may be induced by these lesions, and which may therefore be called "symptomata epigenetica." By attending to this distinction, we shall possibly be enabled to discover the point where the disease ceases to be "dynamic," or as it has hitherto been improperly designated, "functional," and where the "organic" alteration or lesion commences.

In our author's opinion "a primitive disturbance of the vital powers invariably precedes all changes of structure, however slight these may be; and hence every disease has been essentially 'dynamic,' before it has become organic." All organic lesions he has reduced under the six following orders;—

1. Deviations from the normal nutrition of parts, either by excess (hypertrophe) or by defect (atrophy.)

2. Change of the position and connexion of parts.

3. Rarefaction of the tissues.

4. Generation of new tissues, which resemble some of the natural tissues, or homoioplasia.

5. Generation of tissues, which do not resemble any of the natural tissues, or heteroplasia.

6. Generation of morbid products, which may be either organised, and of independent vitality, or quite inorganic. Our readers will find no difficulty in discovering the individual members of

these six orders, except perhaps those of the third, which includes what M. Lobstein has designated "rarefaction of the tissues;" by this term he means "the diminution of cohesion between the component molecules of any part, by the interposition of a gaseous or liquid matter in the interstices of the solids." "It is," says he, "the most simple of all the alterations of texture, and by it all organic diseases commence: there are five species of it, viz. *pneumatosis*, the disengagement of a gaseous fluid; *hydranosis*, the transudation of a watery fluid; *hematonosis*, the transudation of blood; *fluxion*, or that vital movement by which the blood is impelled with unusual force, and in unusual quantities towards any point; and lastly, *inflammation*."

In reference to this last-mentioned morbid process, which has of late years been invested with such an exclusive supremacy over every pathological change, the following very just observations are made by our author. "If inflammation was the source, and essential element of all organic lesions, these lesions, we may fairly presume, should generally occur in sanguineous temperaments and chiefly during the period of youth, when the organs of the circulation are in the most active state. Now the opposite of this is well known to be the case; for these very lesions depend in most cases on an irregularity of the nutritive process, which again is attributable to a 'vicieuse et languissante innervation.' How many of the most characteristic organic changes, such as aneurism of the heart, scirrhus of the stomach and of the womb, congestions of the abdominal viscera, and pulmonary consumption itself, are owing primarily to the baneful operation of some mental emotion! With the single exception of active aneurism of the heart, I do not remember to have met with one case of the fore-mentioned diseases in robust and plethoric subjects, but almost always in delicate feeble persons, whose health has been undermined by severe, or long-continued grief. Laennec has made a similar remark, relative to the disorganising influence of depressing mental affections: they derange all the functions, and in an especial degree, that of nutrition. It is a cheering reflection, drawn from these considerations, that not a few cases of well-marked organic disease have been cured by a treatment directed chiefly to the establishment of a healthy nutritive process in the system.

I have seen tumors gradually disappear, indurations dissipated, ulcers healed, in a word, cures almost marvellous, by the employment of mercurials, antimonials, sulphur, &c. and above all, of thermal waters. Formerly I was ignorant of the astonishing virtues of these waters, and did not believe that they exercised so penetrating an influence on the intimate structure and composition of the body. How often, when I have witnessed cases of disease deemed quite hopeless, gradually cured, have I asked myself, whether some imponderable principle, like that which resides in the nervous system, might not exist in these waters, and impart to them properties 'en quelque sort vitales,'" There is much good sense in some of the preceding observations. The volume is closed with the author's views on the mode of death in disease. "There is," says he, "only one 'maniere de mourir,' and that is, the paralysis of one or of more of the principal vital organs. When the brain is paralysed, death is said to proceed from apoplexy; when the respiratory system, from asphyxia; when the heart, from syncope; and when the solar plexus, from abepithymia."—*Traité d'Anatomie Pathologique; Strasbourg;* 1829.

## NEW PREPARATION OF QUININE, THE HYDRO-FERRO-CYANATE.

Dr. Gouzet the principal physician of the Military Hospital, at Antwerp, has traced the effects of this new preparation in a good many cases.

The reports which he has made of its effects are highly flattering. In three cases of ague, (a quotidian, quartan, and tertian,) a cure was effected by a single dose, one grain of the salt, given an hour before the expected paroxysm. (If this is to be credited, the hydro-ferro-cyanate must be indeed a potent remedy.) Our author, who seems to be an ingenuous man, admits that the intermittent fevers prevalent at Antwerp, are often so mild in their character, that rest in bed, and "un regime très leger," continued for several days, are sufficient for their removal. The salt is prepared by boiling in distilled water a mixture of pure quinine and Prussian blue, and evaporating it to dryness.

The preceding extract is from the "L'Observateur Medical Belge," a new foreign contemporary, which is published at Brussels. It promises to be an exceedingly good periodical, and reflects much credit on the editor for the value of its contents, and on the publisher for the beauty of its typography.

### Varicose Tumor on the Scalp of a New-Born Infant.—Extirpation.—Cure.

The child was only six weeks old when Professor Mersseman was consulted: the tumor was situated exactly over the posterior fontanelle; it had attained the size of a goose's egg, was uneven and "bosselée" to the touch; the skin covering it was rather thinner than usual, but it was not discoloured, except when the child cried, or made any struggle, and then it became livid; there was no pulsation, nor alternate rising and depression of its surface; but when the hand was gently laid upon it, a vermicular sort of movement might be felt; its base was nearly as broad as the body of the swelling. This tumor had been observed at the period of birth, and was then of about the size of a pigeon's egg. The health of the child was otherwise perfectly sound and robust, and there were no symptoms of any cerebral disturbance. There was a difference of opinion among the medical men who saw this case, as to the nature of the tumor: by some it was supposed to be an encephalocele, or hernia cerebri; but the absence of all symptoms indicating any disorder of the nervous system, even when pressure was made upon the swelling, was unfavourable to this idea: that it was not caused by the protrusion of the dura mater, in consequence of a hydrocephalic effusion beneath, was, for the same reasons, as well as from other very obvious considerations, quite improbable: the absence of any pulsatory movements, and the fact that there was no increase of heat in the swelling, pronounced it to be not aneurismatic. Although the diagnosis was certainly obscure, Dr. M. was satisfied that the venous system entered largely into its formation, if it did not entirely constitute it; and he was led to this opinion by the varix-like unevenness of its surface by the vermicular movements felt on gentle pressure, and by the circumstance of its distention when the child cried, or struggled, so that the return of the blood was somewhat impeded. Under this impression, he considered that the safest mode of treatment would be by a ligature put round the base of the tumor, and gradually tightened, until it sphacelated off. Fortunately, no unpleasant symptom followed the application of the ligature; it was tightened on the third day, and not till then, did the integuments present any appearance of strangulation: in other 24 hours suppuration had commenced all round the line of the ligature, and as the discharge was rather fætid, pledgets wetted with the solution of the chloride of lime, were kept constantly on the part. By the fifteenth day, the pedicle being then not thicker than a swan's quill, a ligature "de sureté" was applied, and with one stroke of the knife the mass was detached: scarcely a drop of blood was lost. The exposed surface, (at the bottom of which the fontanelle might be touched) began speedily to granulate, the ligature "de sureté" dropped off, and in the course of a few days the sore was cicatrized.

On dissecting the tumor, it was found to consist of a bundle of veins, which had become enormously enlarged, so that at some points they formed almost spherical dilatations: these veins were joined together with an adipose cellular tissue, which had been converted, in consequence of the sphacelus, into a purulent pappy substance. The important lesson was afforded by the examination, how dangerous it would have been to have either incised or extirpated this swelling.—*L'Observateur Med. Belge.*

---

### SERUM OF A BLUEISH COLOUR FROM A BLISTERED SURFACE.

An anasarcous patient was recently received into the Hospital of Louvaine, in whom this curious phenomenon was observed.

After the use of diuretics (the particulars are not stated) a blister was applied on each ham, and the surface was then dressed twice a day with the "onguent perpetuel." The blue exudation was noticed first on the left leg, and in a few days subsequently, on the right one also: this coloured exudation continued for several days, after which, the discharge resumed its usual appearances.

Upon analysing the blue serum, it was found that its specific gravity was rather greater than that of water, that its smell was sickening and offensive, and that it had somewhat of a urinous taste. On exposing the linen stained with it to the action of the air and light the colour changed gradually from a sky-blue to a pale green. It was observed to affect test paper as an alkali does: this property depended on the presence of free ammonia. Acids converted the colour into a red. On evaporating the water, in which the linen had been steeped, a flocculent matter was deposited, and at length a residue of a deep green hue was obtained. The action of chlorine on the coloured water was very immediate, destroying at once all smell and colour; and these properties could not be restored by any means.

Several cases in which the urine or perspiration has been of a blue colour are recorded in different medical registers; and we are told that chemica analysis has always detected the presence of prussic acid, in union with some basis, under these circumstances.

In the one now detailed, no traces of any prussiate could be discovered.—*Ibid.*

---

### ANECDOTES OF THE DISTINGUISHED ANATOMIST VESALIUS.

With a praiseworthy spirit of national enthusiasm, our cotemporary of Brussels has commenced a series of biographical sketches of the most illustrious physiciaus and surgeons, whom Belgium, as their birth-place, lays claim to.

First and foremost on the list, is Vesalius, (born at Brussels, 1514,) the founder of human anatomy, and of whom Senac has said, "before he had completed his twenty-eighth year he had discovered a new world," meaning, the microcosm of man's body.

Before his time, the works of Galen, who it is well known, derived all his knowledge of anatomy from the dissection of the lower animals, were received as oracular; but their glory and ancient authority were doomed to cease, on the appearance of the splendid "Epitome de Corporis Humani Fabrica," published at Basle, 1542.

So admirable is the drawing of many of the figures, that it has been attributed to the pencil of Titian, who lived on terms of great intimacy with Vesalius, and whose beautiful portrait of his friend was lately bequeathed by M. Portal to the Royal Academy, of Medicine, at Paris. His countrymen were so justly proud of the magnificence of the work, that the magistrates of Antwerp, in 1572, voted a sum of the public money to complete the edition begun by the famous printer, Chrystophe Plantin at his own expense. Vesalius commenced his studies at Louvain. He early distinguished himself by his excellence in the Greek and Latin classics. Repairing then to Montpellier, at that time celebrated as the chief depository of the Arabian literature, he pursued his medical studies with great ardour for some years; he afterwards went to Paris, as it afforded a more extensive and varied field for the prosecution of his favourite study, anatomy. There he became acquainted with Silvius, but a quarrel soon took place between them on the merits of oracular Galen, who was the "all in all" of the Parisian professor.

At this period, the war which had for so many years been carried on by Charles V. of Spain, against Francis I. of France, became more inveterate than ever, and the subjects of the one prince could not with safety remain in the dominion of the other. Vesalius therefore left Paris for Louvain, where he began to teach anatomy, and was soon after appointed surgeon of the Imperial army.

Although only 24 years of age, so high did his reputation stand, that he was solicited by the Venetian Government to accept the vacant chair of anatomy at Padua. He remained there until 1545, when he was summoned to Madrid, and made chief physician to Charles V.

The constant attendance which he was obliged to bestow on his illustrious patient, accompanying him, as he did, in all his enterprizes and campaigns, and the many ceremonials of a courtier's life, not to speak of the extreme difficulty of prosecuting dissection in a country so bigotted as Spain, were unfavourable to the accomplishment of those works, which Vesalius had engaged in, and which, imperfect though they are, remain proud monuments of his genius and perseverance. After Charles made the memorable abdication of his throne, in favor of Philip, his son, the same lofty distinctions were conferred by the young Emperor, on his father's physician; and if we may judge from the records of his great skill, these honors were fully merited. By his admirable knowledge of the structure of the human body, he had obtained a singular exactitude in the diagnosis of many diseases, the nature of which was but little understood in those days.

While in the plenitude of his fame and affluence, he was, as too generally happens, the object of rivalry and envy to others, and willingly was any report, however false and malicious, credited and diffused to injure the reputation of Vesalius.

Unfortunately an apparently just occasion was now afforded to these calumnies.

It happened that he had been attending a Spanish nobleman, whose disease had baffled the skill of all the medical men of Madrid. At the dissection of the patient, the surgeon and his assistants (Vesalius was not present) were horror struck, we are told, on finding that the heart still palpitated; and in the rashness of their ignorance, they loudly accused Vesalius of homicide, before the tribunal of the Inquisition. Sentence of death was pronounced by the monsters of this court against their innocent victim; and no doubt it would have been carried into execution, had not the intercession of the Emperor, and of many of the nobles, prevailed to transmute the punishment of death, to that of a pilgrimage to the Holy Land!! In 1564 he embarked for Jerusalem, and while residing there, he received an earnest solicitation from the Venetian Government to return to Padua, to fill the anatomical chair, which had become vacant by the death of Vesalius's favourite pupil, Fallopius. Alas! the master was soon to follow: the ship on the voyage home was shipwrecked off the coast of Zante, and he who had lately basked in the sunshine of the most splendid of the European courts, died of starvation on a desolate rock in the Mediterranean.

All the works of Vesalius were collected together and published under the care of Boerhaave and Albinus, in two folio volumes, at Leyden, 1725. It may be mentioned, that Copernicus, Galileo, Torricelli, and Pascal, were cotemporaries of the subject of the preceding sketch.—*Ibid.*

---

## LIGATURE OF THE SUBCLAVIAN ARTERY. PATIENT SURVIVED 35 DAYS, ALTHOUGH THE AORTA WAS DISEASED.

The patient was a man 44 years of age,

whose health had been much injured by frequent syphilitic disease. There was a well-marked aneurismatic swelling of the subclavian artery, where this vessel is situated sacrad to the clavicle; and by pressing the finger into the hollow between the sternal ends of the sterno-mastoid muscles, the arch of the aorta might be felt beating violently.

The patient suffered great pain in the site of the swelling, and along the whole extent of the left arm; this was no doubt attributable to the compression of the axillary plexus of nerves; but there were other symptoms present of far more urgent importance, and which implied an unfavourable condition of the thoracic viscera: the patient had laboured for a considerable time under a distressing dyspnœa; the carotids beat most furiously, the features of the face were always full of anxiety, and sometimes severe headaches were added to his other sufferings. These circumstances induced Dr. Sentin to suspect the existence of disease either of the heart itself, or of its large vessels; and he therefore was opposed to the performance of an operation. The Valsalva treatment was tried for a week or so, and also permanent compression on the affected subclavian, where it passes over the first rib; but instead of doing good, these means seemed to aggravate the disease: the pain became now most excruciating, and the size of the aneurismatic swelling increased; the slightest movement of the arm caused the patient to scream out. The operation of tying the artery was now performed with the view, we are informed, "only of prolonging the poor man's life."

The symptoms of pectoral distress were, for two or three days after the operation, decidedly relieved, and the swelling was considerably reduced: a sharp darting pain was occasionally felt in the left side of the chest, but this was always readily removed by the application of the cupping-glasses. The wound suppurated, but the discharge of the matter was not free and copious.

On the 20th day after the operation the ligature came away, and every thing promised a complete recovery: thirteen days however after this date, a hœmorrhage to the amount of 8 or 10 ounces took place: this was arrested by moderate pressure, and as the pulse had become full and firm, two small venæsections and the rest of the antiphlogistic treatment were immediately practised: these means seemed to be successful, until the following day, when the hæmorrhage recurred: it was again arrested; but although the patient did not lose above ten ounces of blood, he became so exhausted, that all hopes of saving his life were dissipated. In the course of the ensuing night be died.

*Dissection.* A few ounces of serum were found in the pleuræ; the lungs were healthy; the heart was loaded with fat; traces of old inflammatory attacks were observable on the right ventricle; the calibre of the aorta from its origin till it reached the diaphragm, was greatly enlarged, and here and there the tunics presented patches of structural degeneration; the root of the left subclavian artery was distended into an aneurismatic sac, which adhered intimately to the apex of the superior lobe of the lung on that side; on tracing the artery, no coagulum was found within it, on the proximal side of the ligature, (which had worked its way through all the coats of the vessel) but at the distance of about two lines from the ligature was a perforation through all the tunics, which thus established a direct communication between the interior of the artery and the outer wound. It had been from this opening that the fatal hæmorrhage had escaped.

Considering the great extent of arterial disease, the temporary success obtained in the preceding case by tying the subclavian was certainly highly satisfactory.—*Ibid.*

### CASES OF FRACTURE OF THE CARPAL EXTREMITY OF THE RADIUS, WITH PRACTICAL REMARKS ON THAT ACCIDENT.

CASE 1. *Fracture attended with Displacement radiad—Reduction on the 20th day.*

A lady, 69 years of age, fell with violence on the hand: the true nature of the accident was not recognised; it was believed to be only a sprain. As the swelling subsided the deformity of the wrist became more and more conspicuous, and the movements of the joint still more impeded. When she consulted Dupuytren at the end of the third week, the following was the state of the case;—the hand was strongly drawn outwards, or in the direction of abduction: a depression might be felt at the inferior extremity of the radius: the acts of pronation and supination were scarcely possible, and when attempted, caused extreme pain.

The replacement of the fracture was effected by an assistant grasping the forearm and making counter-extension, while M. D. drew the hand powerfully inwards, or in the line of adduction: by degrees the depression became less and less perceptible, and when the reduction was complete, the joint was well secured by the application of splints, which were kept on for ten days, and then re-applied for other three weeks. The cure was most satisfactory, no deformity remaining.

CASE 2. *Fracture in a Child—Accident mistaken—Reduction 29 days afterwards.*

This patient received the injury by falling from a tree; the surgeon under whose care he was placed, thought it merely a severe bruise: the deformity became more apparent as the swelling declined. The fore-arm being secured by an assistant, M. Dupuytren was obliged to continue his exertions for a length of time before the depression between the fractured ends of the radius was effaced. At length however this was effected, and splints were applied: the application of these was renewed every ten days for three weeks. The cure was complete.

CASE 3. *Circumstances similar to those in the preceding case.*

A boy, 13 years old, in consequence of falling from a tree upon his right hand, fractured the extremity of the radius; but this accident was not detected till the beginning of the fourth week after its occurrence. The reduction was quite as difficult as in the preceding case, and fortunately the event was satisfactory, the boy recovering with the perfect use of the hand.

CASE 4. *Fracture—Nature of the accident mistaken—False joint formed.*

A middle-aged man came to the Hôtel Dieu to consult M. Dupuytren respecting an injury of his wrist, which he had been told, was dislocated backwards. The accident had happened three weeks before, and had been caused by falling on his hand. Several attempts had been made to reduce this supposed dislocation, but the deformity had always returned as soon as the extension was withdrawn.

Dupuytren at once recognised the nature of the injury. The radius had been broken immediately above its styloid process. The motions of the wrist and fingers were extremely painful, and indeed scarcely possible; but it was observed that the broken ends of the bone were freely moveable upon each other, and the Baron therefore inferred that a pulse, or secondary articulation had begun to be formed, no doubt in consequence of the repeated and violent efforts which had been made to reduce the deformity. He advised the patient to go into the Hospital as an in-patient, but this was declined, so that the event of this case is not known.

*Reflections on the preceding Cases.* It is the opinion of Dupuytren and some other excellent surgeons, that genuine simple dislocation of the wrist-joint very rarely, or perhaps never takes place, and that all the cases recorded as such have been so many examples of erroneous diagnosis. We do not at present include those cases, in which the joint, or its capsule have become diseased, as from white-swelling, dropsy, &c. Perhaps under these circumstances, the extremity of the radius may become fairly displaced from the convex arch of the carpal bones; but such an accident must be very rare; all that we insist upon is, that it is seldom or never caused by outward violence. The injuries which have been mistaken for it, are dislocation of the ulna, dislocation of some of the carpal bones, fracture of the radius, or of the ulna, or of both bones, and lastly, separation of their epiphyses: by far the most frequent of these, is fracture of the carpal end of the radius. If these sentiments be correct, how countless must have been the instances of mala praxis. The Italian surgeon Paletta, arrived at the same conclusion, and nearly about the same period (1820) as the celebrated Frenchman; the words of the former are—"Suspicari liceat manum e loco penitus promoveri non posse." And again—"Ut diceres cubitum quasi ad id intentum esse, ne manus e suo nixu excidat."

The case recently published by M. Forget, in the Trans. Med. de Paris, as one of dislocation of the radius, we have no hesitation in pronouncing to have been rather one of dislocation of the ulna, and we have the authority of Sir A. Cooper to shew that such a mistake may not be uncommon: he says —"Luxation of the ulna at the first sight exhibits the symptoms of dislocation of the hand backwards." Certainly, in M. Forget's case, the symptoms reported do not warrant the conclusion which the author has come to, respecting the nature of the injury.

When in young children the extremity of the radius is broken, or what is more common, when the epiphysis is detached, the diagnosis is often still more obscure, than when the accident occurs in adults; the crepitation is much less distinct, and sometimes indeed scarcely perceptible, in consequence, no doubt, of the less density of the bone, of the greater quantity of blood effused between its extremities and of the periosteum, and indeed of many of the osseous fibres too, having not been lacerated; hence the lateral displacement of the fractured ends is usually less considerable, and hence too that degree of curvature which the wrist sometimes assumes in this accident, when it occurs in children. This last mentioned phenomenon is particularly worthy of attention, because, from not being well understood, it has given rise to a most serious practical error. It has been supposed that the carpal extremities of the bones of the fore-arm may, in young children become suddenly bent or curved without any fracture, or displacement of the epiphysis, by falling with force from a height on the hands: this accident has been denominated "primitive and accidental curvature of the bones of the fore-arm." The prognosis and treatment are thus described in a treatise, by M. Thierry, in a memoir published in 1808.

"Le mal guerit ordinairement en douze ou quinze jours, s'il n'est pas meconnu; mais, si l'on n'y apporte pas les soins convenables, l'avant bras reste difforme, s'atrophie, et le malade ne peut presque plus s'en servir."

"*Traitement.* Extensions tres fortes, mais graduées, et cooptation avec les paumes des mains pour redresser la courbure saillante."

We need not say that, however correct the prognosis and mode of treatment may be described, the diagnosis is quite at fault.

The following case, extracted from the late Professor Wilson's treatise on the Bones and Joints, is admirably illustrative of the truth of our remarks

"A child, three years old, fell from a considerable height upon the pavement: the head was seriously injured, and the right fore-arm was bent nearly to a right angle. The child died soon after the accident; and on dissection it was found that the curvature of the fore-arm was the effect of a fracture of the bones: the fracture however did not extend through the entire thickness of the bones, the fibres on the posterior surface being not divided, and the periosteum moreover not being lacerated."

From the investigation of the two most celebrated surgeons of the present day, Sir A. Cooper and Baron Dupuytren, it appears, that there are three sorts of fracture of the carpal extremity; that the bone may be broken either right across, or in an oblique direction into the joint of the wrist, or into several pieces, constituting a comminuted fracture.

Now it is chiefly these two last-mentioned sorts, that have been so generally mistaken for dislocation of the wrist; and the error of diagnosis arises in this way; the wrist-joint, having lost the support and stability afforded by the articulating extremity of the radius, is drawn, by the action of the muscles of the fore-arm, from its normal direction, and becomes inclined either to one side or to the other, or forwards or backwards, dragging the fractured portion of the radius with it, and causing it to project, as if it were dislocated: the circumstances too of the absence of crepitation, and of the facility with which the deformity may be removed for the time by extension, tend to confirm the error of diagnosis. It is to be hoped that this practical error may be henceforth avoided by surgeons, as well for their own credit, as for the successful recovery of their patients; for it is to be remembered, that not a few awkwardly anchylosed joints have been the result of what have been supposed to have been cases of dislocated wrist. Sir A. Cooper judiciously recommends that the splints and bandages should be removed at the end of the third or fourth week, according to circumstances, for the purpose of accustoming the joint to gentle movements. Even under favourable circumstances the joint sometimes does not recover its free motion for many months: this inconvenience is most frequent, as we may suppose, after an oblique or comminuted fracture of the radius. — *Archives Generales*, *Aout*, 1834.

---

### PATHOLOGICAL ANATOMY OF THE PNEUMOGASTRIC NERVE.

Professor Albers, of Bonn, examined most attentively the pneumogastric nerves in forty-seven cases of hooping-cough: in four patients only, and these were scrofulous and lymphatic subjects, did he find any appearance of inflammation, or of any other disease.

In fifteen cases of phthisis pulmonalis these nerves were found on dissection to be unusually developed, and one was considerably larger than the other. Messrs. Swan and Descot have made the same remark. But it is in that disease which has been called intermittent croup (the crowing respiration of English authors ?) in which the pathological anatomy of the nervi vagi has been most satisfactorily investigated.

The late ingenious researches of Dr. Hugh Ley, of London, have created much interest respecting this perplexing subject; and certainly some of the subjoined cases seem to corroborate the opinions of this able physician.

CASE 1. *Intermittent Croup—Tuberculous Enlargement of the Cervical and Bronchial Glands; adhesion of the Par Vagum to these Glands.*

A child, two years of age, labouring under the symptoms of croup, was visited by Dr. Hankel, in June, 1820, The glands of the neck were observed to be swollen. Three children of the same family had been cut off by sudden attacks of convulsion. Leeches, emetics, and calomel powders were ordered. On the following day the croupy noise in breathing had ceased; respiration still hurried; cough not severe; and towards evening the child seemed to have quite recovered from every troublesome symptom. Next morning the strangling dyspnœa returned, and after continuing for an hour or two, again ceased. Frictions on the neck with a volatile mercurial ointment. For twelve days these alternations of repose and distress were wretched: the child became gradually weaker, and died.

*Dissection.* The trachea was completely surrounded with swollen and diseased glands: three of these glands were much larger than the rest: one was situated over the left bronchus, to which it adhered by a dense cellular tissue; it was the size of a large walnut, and when divided, exhibited all the ordinary appearances of a pulmonary tubercles; at one point the tuberculous substance was beginning to be "ramollie;" the second was quite as large as the former one, and was situated exactly over the bifurcation of the trachea; the third was on the right side of the trachea, and adhered intimately to the par vagum of that side; the nerve did not however appear to be at all altered in texture; the lungs presented tubercular and melanotic deposition in different parts; the mucous coat of the trachea and bronchi appeared sound.

Dr. Hankel thinks it probable, that the attacks of croupy dyspnœa were owing to the irritation caused by the ramollissement of the glands, and that the death in this case "fut le resultat de la paralysie complete du nerf vague." It is probable, says Dr. H., that, much more frequently than we have hitherto supposed, the etiology of many thoracic diseases, and more especially those which are chronic, and which depend upon a morbid affection of the bronchial surface, is to be sought for in the condition of the cervical and bronchial glands. M. Andral also has directed the attention of pathologists to the same subject. The following case reported by him is beautifully pertinent.

CASE 2. *Recurrent Dyspnœa—Death —Disease of a Par Vagum.*

A man, 24 years of age, had for a length of time suffered from most distressing dyspnœa; the respiration was always short, hurried, and confused, and to appearance was effected by the action of the thoracic muscles alone, the lungs being merely passive: the horizontal position was quite intolerable; the face was bloated; the lips and alæ nasi of a livid hue; the eyelids œdematous. No sign of any disease of the heart could be detected by the stethoscope. During a paroxysm of severe dyspnœa this patient suddenly expired.

On dissection, a portion of the left par vagum was found quite enveloped in a mass of tuberculous glands, and the substance of the nerve itself was extremely indurated.

CASE 3. *Dyspnœa—Remarkable slowness of the Pulse—Death—Disease of the Nervi Vagi.*

Maria Cocchi, aged 40, had enjoyed good health till her thirtieth year, when she had a severe attack of pneumonia: from that period the breathing had been always oppressed.

In October, 1832, having fatigued herself more than usual, and taken rather more wine than she had been accustomed to, she was seized with a stupor, which lasted for several days, and during which, she was scarcely conscious. On recovering from this attack, the respiration was more difficult than ever, and the pulse which was naturally slow, became extraordinarily so, beating only 24 times in the minute.

The chest being carefully examined with the stethoscope, the respiratory murmur was heard over every part; it was rather puerile: the sounds of the heart were regular, somewhat stronger, and might be heard over a greater extent than in health: the inference therefore was, that there was dilatation with hypertrophy of this organ. The diagnosis was certainly puzzling. A variety of remedies was tried, but with no good effect. Before death, the breathing became stertorous, and the face as purple as if she had been strangled.

*Dissection.* The head was examined, but no decidedly morbid appearances found there. In the chest there were several recent pleuritic adhesions: the principal bronchial glands were greatly enlarged and loaded with a calculous matter: a considerable quantity of a yellow coloured serum in the pleuræ, and also in the pericardium: the texture of the heart quite sound, but its volume somewhat enlarged: a few patches of steatomatous degeneration were seen on the aorta: the pneumogastric nerves, a little below the larynx, were found imbedded in a mass of swollen glands, and these enveloped in cellular membrane, which was much loaded with blood: the right nerve seemed to have been most affected, and at one point it presented the appearance of having been "tiraillé" and flattened.

CASE 4.—*Recurrent Dyspnœa—Vomiting—general Nervous Disturbance—Disease of the Spinal Cord and Nervi Vagi.*

A man 29 years of age, of an exceedingly nervous temperament, was, for a considerable length of time, distressed with fits of dyspnœa and of vomiting; these attacks were usually attended with a sense of constriction in the region of the stomach and across the chest, and with a numbness of the fingers and toes; subsequently, an annoying cough, pain in the throat, hoarseness, and paralytic weakness of the extremities came on, and, at length, the patient died semi-delirious.

On dissection, the spinal marrow was found softened, and otherwise diseased, at several points; the neurilema of the left par vagum presented a remarkable degree of redness; the cervical portion of the nerve was larger than usual, and seemed as if it had been soaked in a fluid, for its pulpy substance melted away between the fingers; these morbid appearances were especially distinct in its posterior or pulmonary branch—on cutting it across, several drops of serum escaped from the surfaces. The neurilema of the right nerve, also, was highly congested, but its substance was normal. The lungs, on the whole, were healthy; here and there, indeed, they presented a few hard tuberculous points; the heart and large vessels were sound—the abdominal viscera, with the exception of the stomach which had become so much softened towards the large end that it tore across on merely lifting it, exhibited nothing unusual.

CASE 5.—*Recurrent Dyspnœa—Dropsy—Death—Dissection.*

A man, 35 years of age, had, about 12 years previously to his admission into the hospital, suffered from a smart attack of hooping-cough, and subsequently from a spasmodic affection of the chest, which left him so irritable, that the least irregularity of the weather brought it back. A sense of constriction across the chest was seldom absent; the more severe attack usually set in by the respiration becoming short and oppressed—by a feeling, as if something was drawn tightly round the chest—by the voice being weak, and the effort to speak even painful; by degrees, these symptoms were greatly aggravated, and the dyspnœa was so grievous, that the surface of the body became cold and clammily damp, the voice shrunk into a hoarse whisper, the features were distorted, and the patient fell into a state of partial insensibility; the duration of these paroxysms varied from an hour to a whole day. In course of time, other miseries were added to this patient's sufferings; the face became bloated—the extremities œdematous—there was a sickening oppression at the epigastrium—the spleen was enlarged—an icteric yellowness of the skin, and, lastly, general dropsy supervened. In this state, the patient lingered for several years; every now and then, he seemed to have almost conquered his disease; but at length he fell a victim to its repeated attacks. For a few days before his death, there was a convulsive affection of the upper extremities, and a degree of general stupor.

*Dissection.* Substance of the encephalon healthy; serum effused between the dura mater and arachnoid coat; about an ounce in the lateral ventricles; lungs normal; several pounds of serum in the cavity of the peritoneum; abdominal viscera not materially affected in any way; the right par vagum, in its passage from the neck into the thorax, was highly congested with blood, and its substance was much harder than is usual; the nerve, on the left side, was smaller than its fellow, and was so much softened in texture, that it melted down between the fingers.—*Rust's Magazin, tomes* 39 *and* 41.

## ANATOMY OF THE LYMPHATIC SYSTEM.

Our only object at present, in alluding to this obscure branch of anatomy, is to recommend to the notice of our readers, and especially to public teachers, a very admirable and original work by Professor Fohman, of Liege, entitled, "a Memoir on the Lymphatics of the Skin, Serous membranes, and of the Nervous and Muscular systems," and published there last year in 4to. with ten plates. The author distinguished himself as an able anatomist, in 1821, by his ingenious treatise on the communications which exist between the venous and lymphatic systems, and again, in 1825, by his History of the Lymphatics in Fishes. In 1832, he published a memoir on the Lymphatics of the Placenta and of the Umbilical Cord. We have heard that the dexterity which he has acquired in injecting and demonstrating the lymphatic vessels is quite remarkable; and the value, therefore, of his plates is much enhanced by the assurance, that they were all drawn from injected preparations in his possession. Mascagni, his most distinguished predecessor, contented himself, it is well known, by tracing the uninjected lymphatics, by means of a magnifying-glass: it must be obvious that this method can scarcely be trusted to.

Prof. F. has ascertained, that the ultimate termination of the lymphatics is not in simple and open radicles, but in anastomotic plexuses, which become finer and more delicate as they approach the surface, whether of the skin, or of the mucous or serous membrane; there are not, therefore, open orifices at the extremities of these vessels; and, if any orifices exist at all, they must be in their parietes or tunics.

---

## MELANOSIS OF THE EYEBALL.

The following description of the appearances observed in two eyeballs, which had been extirpated for this disease, is taken from the "Abhandlung über die Melanose des Augapfels" of Dr. Pruscha. In one, all traces of the retina, corpus vitreum, lens, and iris were gone, and nothing but a brownish-black substance, penetrated with numerous tough fibres, was to be seen; the portion of the melanotic growth, which had protruded through the cornea, fell off, and, when put into water, readily dissolved, imparting a brownish-black colour to it. In the other eye, the only part affected with the genuine disease was the internal surface of the choroid coat, which was of a greyish-brown colour, firm, and was very vascular; the retina and corpus vitreum were converted into a semi-fluid, brownish substance; the lens was slightly opaque, the iris had a dirty-blue colour, and the cornea was normal, but pushed somewhat downwards.

---

## PHRENOLOGY, HUMAN AND COMPARATIVE

We avail ourselves of Professor Bouillaud's review of Vimont's splendid work, "Traité de Phrenologie Humaine et Comparée avec un magnifique Atlas, in folio, de 120 Planches, conténant plus de 600 Sujets," to extract a few of the most interesting details. The following propositions embody most of the general conclusions.

1. The figure of the cranium, in the different orders of vertebrated animals, is amazingly differed; but each genus has its own unvarying type, and this cannot well be mistaken for the type of any other. The members of every genus exhibit numerous modifications of form, according to the characters of the animals.

2. The form of the cranium being known, it is quite easy to ascertain that of the encephalon, except, perhaps, at one or two points, such as over the frontal sinuses, &c. and also in some cases of organic disease.

3. In man, the anterior part of the cranium is more developed than in any other vertebrated animal.

4. The inner surface of the cranium exhibits in many of the genera, as in man, the quadrumena, ruminantia, pachydermata, solipeda, and carnivora, numerous pits and depressions, which correspond with elevations on the surface of the encephalon.

5. The inner surface of the cranium in the rodentia, and also in all birds, is, on the whole, even and smooth; one portion may be more depressed than another; but there are not the irregula-

rities observed in the crania of the animals mentioned in the last paragraph.

6. In birds, the internal surface of the cranium is in more immediate apposition ("se trouve le plus en harmonie") with the encephalon than in other vertebrate animals. The rodentia are next, in this respect, to birds; and then the smaller carnivora.

7. In birds, there is a greater symmetry between the two sides of the encephalon than in other vertebrate animals; the right half corresponding very accurately to the left one.

The higher we assend in the scale, the less perfect is this symmetry—in man, it is least conspicuous.

M. Vimont is at issue with several of his most distinguished cotemporaries, such as MM. Serres and Desmoulins, as to the existence of certain laws, or rather as to the truth of certain propositions, which they have enounced, relative to the physiology of the brain. It will be interesting to glance at some of these.

In the anatomie comparée du cerveau M. Serres states—"It is certain, that in proportion as the neck is lengthened in an animal, or set of animals, so are the brain and spinal cord more slender, "effilés." On this statement, M. Vimont remarks that there are numerous examples quite inconsistent with this assumed law; for example, the brain of the heron is much larger, and the spinal marrow less "effilée" than in the parrot; and again, the brain and marrow of the domestic goose are larger and less "effilées" than in the buzzard.

*The second proposition* advanced by M. Serres is expressed thus. "There is no steady relation between the volume of the brain and that of the spinal marrow, unless we confine our observations to one portion only of the former, viz. the corpora quadrigemina; between these and the spinal marrow there appears indeed to be a uniform ratio of development; so that the volume of one being known, we may "determiner rigoureusement" the volume of the other."

M. Vimont expresses his surprise at the bold assurance of M. Serres, in propounding such a manifest error. "The spinal marrow," says he, "of the cuckoo is very small, and the corp. quadrig. very large; in the buzzard, the marrow is smaller than in the domestic goose, but the corp. quad. are larger. Examples to the same effect may be derived from the anatomy of many of the mammalia."

*The third proposition* is, "that the development of the corp. quadrig. is in all the classes of vertebrate animals in proportion to the bulk of the eyeballs."

M. Vimont adduces several instances where this pretended law is quite at fault.

*The fourth proposition* is, "that the spinal marrow is in all the classes developed in a direct ratio to the size of the median lobe of the cerebellum." "Never was any dogma more erroneous," exclaims M. Vimont. Let us now turn to M. Desmoulins, and glance for a moment at some of his supposed discoveries. In the "Anatomie des Systemes Nerveux des Aminaux Vertebrés," we are informed that "in almost all the species of the martin tribe, the brain has a smooth surface; there is not a single furrow on the brain of the weasel." M. Vimont replies, that surely M. D. has never dissected the brain of a single species of this genus; for in all, without one exception, the convolutions of the brain are very distinct, and he refers us to two of his published plates.

At another place of his work M. D. affirms, "that he has never been able to detect the least rudiment of a pineal gland in any of the carnivorous or of the gallinaceous tribe of birds." It is not surprising, says M. V. that a person who could not see any convolutions in the brain of a martin, has not been able to find the pineal gland in certain birds: it is distinct in the brain of the goose, the buzzard, the common fowl, and many others, which I have dissected. As to its presence in the eagle, hawk, &c., I have not satisfied myself on this point.

We have been so much amused ourselves with the truly French spirit of the following remarks that we are tempted to extract them for our readers' benefit. "I am certain," says M. Vimont, "that the brain of Napoleon must have been very large, because his head, independently of its own ample dimensions, belonged to a body in which the osseous system was not strongly developed, as we may infer from the well-known "petitesse de ses mains!" Professor Bouillaud is not inclined to be "seduit par cette raison." "I do not doubt," says he, "that Napoleon le Grand had a brain, 'qui fit honneur à son genie, ainsi qu'à la doctrine phrenologique,' but at the same time I am disposed to believe that the bones of the 'imperial cranium!' had an average thickness. for we find that the mould taken by Automarchi 'of the hero of St. Helena!' after death is remarkable for the 'beau developpement' of the lower jaw; and it is probable that the other bones of the face, and those of the cranium, corresponded in thickness with the lower maxilla!!"

---

## DETECTION OF THE MATTER OF MIASMATA IN THE AIR.

In a memoir lately read by M. Boussingault, at the Academy of Sciences, this most curious subject of meteorological enquiry is very ingeniouslytreated. It is well known that miasmata are almost always generated in places where dead vegetable matter is exposed to the conjoined influences of heat and of moisture, and hence, that they are of frequent and perhaps constant occurrence in warm marshy districts, especially if there be any admixture of fresh and salt waters, or if the ground has recently been turned up. The observations of all enquirers agree in representing the evening, soon after the setting of the sun, as the period at which the miasmatic influence is most actively pernicious, and in shewing that the deleterious atmosphere rests chiefly in the valleys and low grounds, while the more elevated positions are often quite exempt from its agency. Many years ago Moscate was led, by attending to these circumstances, to believe that perhaps the matter of miasmata might be discovered by collecting and condensing the dew, and submitting it to chemical analysis. His experiments were performed in the rice-grounds of Tuscany; and the results of these were, that the water so treated did very often exhibit flocculi, which had the properties of an animalised substance. Subsequently M. Delille announced that the water which he collected by condensation from the atmosphere in the marshes of Languedoc readily putrefied, and exhibited then flocculi of a highly azotised matter, which, on the addition of nitrate of silver, afforded a purple precipitate.

In 1819, M. Boussingault observed that sulphuric acid placed in the neighbourhood of pools, in which hemp was steeping, quickly assumed a dark colour, whereas, at a greater distance from these foci of putrefaction, the change took place much more slowly. At the period of this observation, a pestilential fever was ravaging the district of Ain, where M. B. was residing; and he was hence led to conjecture that the two coincident phenomena might be owing to the operation of the same agent, and that this agent, from its blackening sulphuric acid, no doubt, contained some carbonaceous matter.

When M. B. visited South America, he repeated these experiments in many places, which were notorious for their pestiferous miasms; but in these warm regions, the atmosphere so teems with insects, that the change in the colour of the acid might be supposed to be owing, in part at least, to some of these having fallen into, and being charred by, it. His apparatus, therefore, required some improvement, to guard against this objection, and he acquaints us that when he was residing at Carthagena, he adopted the following precautions:—

"Soon after sunset," says he, "I placed two watch-glasses on a table in the middle of a marshy plain: in one of these glasses I put a few drops of warm water, for the purpose of moistening its surface, and imparting to it a temperature somewhat above that of the atmosphere: the cold glass was speedily covered with dew, but almost none was condensed on the other one. A drop of strong sulphuric acid was then added to both glasses, and when their contents were slowly evaporated to dryness by the heat of a lamp, it was invariably found that a trace of carbonaceous matter adhered to that glass in which the dew had been deposited, while none could be seen in the other. This mode of experimenting possessed the advantage of requiring but little time for its performance, and if any insect happened to fall into either glass, it could be at once removed with a needle.

By using two glasses, the objection that any particles of dust floating in the atmosphere might have been entangled in the fluids was guarded against; for if the carbonization depended upon this cause, it is evident that it must have affected both glasses equally."

The above-mentioned experiment was repeated by M. B. for several evenings, and uniformly the same results were obtained.

---

### RUPTURE OF VARICES OF THE VAGINA AND EXTERNAL GENITALS, DURING AND AFTER LABOUR.

This accident, although of rare occurrence, is truly alarming, if it takes place at the period of parturition. The narration of a few cases will best illustrate its character.

CASE 1. *Rupture of the Varicose Tumor—Death.*

A woman, 41 years of age, pregnant with her fifth child, was seized with labour-pains on the evening of the 17th August. When the membranes had burst, and the liquor amnii was discharged, the pains gradually abated. Soon afterwards, however, upon the patient being placed "sur le lit de travail," a severe and lengthened pain came on, and the midwife now found that the left labium had become immensely swollen and discoloured. The physician was immediately summoned; but, before his arrival, the tumor had burst, and a quantity of black blood been discharged. The woman became immediately exhausted, then convulsed, and she died within half an hour after the accident. The child was extracted after the death of the mother, but it also was already lifeless.

*Dissection.* On the inner surface of the left labium was found a rent, an inch and a half in length, through which the fingers might be passed into a "vaste poche," containing a considerable quantity of clotted blood. On the right labium, and on the inner side of both thighs, were several varicose swellings, which no doubt would have burst at some future period, had the patient lived, and been exposed to strong efforts of any kind.

CASE 2. *Rupture of the Varix—Death.*

The labour had continued for upwards of twenty hours, when the "sage femme" found to her consternation that the right labium was much distended and discoloured, and that blood was dripping from its inner surface. Notwithstanding her alarm, she did nothing more than merely apply a wet rag to the "bas ventre." In a quarter of an hour this poor patient "avait cessé de vivre." The doctor, on examining the parts, found a rent, two inches long, on the inner surface of the right labium; it led into a sac, of nearly four inches in circumference, and which extended under the os pubis, and on the outer side of the ascending ramus of the arch: at the bottom of this sac was seen the ruptured orifice of the varix. This patient was about 40 years of age. The pelvis was somewhat contracted in its dimensions.

CASE 3. *Rupture of the Varix—Death.*

Dr. Ebert was summoned to the assistance of a woman in labour, but she had just expired on his reaching the house. She was about 34 years of age, and the mother of seven children. The labour had begun favourably, and the pains had been at first regular and steady. On a sudden the woman felt that a quantity of fluid was running away from her, but she thought that it was the "waters;" the nurse, however, found that it consisted chiefly of blood: in half an hour the patient "rendit le dernier soupir." The corpse presented an exsanguine appearance, the face and extremities being blanched like white wax. On the right labium, which was considerably swollen and of a livid colour, were seen three ragged wounds; through each of these, the finger could be passed into a "cavité vaste," which still contained a quantity of black coagulated blood. On the left labium, and also on both thighs, there were numerous varicose distentions.

In the three preceding cases, the accident took place before the expulsion of the child, and in all, the child was dead when extracted. In the following case, the delivery had fortunately taken place, before the rupture of the varicose swelling.

Case 4. *Rupture of the Varyx—Recovery.*

Immediately after the expulsion of the fœtus, the external parts became enormously swollen, and at length the integuments gave way at one point, and an alarming hæmorrhage took place. The immediate application of rags dipped in cold water arrested the flow of blood; and the exhausted strength of the patient was then supported and revived by sinapisms to both legs, and by a cordial medicine exhibited frequently.

Case 5. *Varicose Tumor high up in the Vagina—Rupture—Death.*

A woman, 46 years of age, mother of eight children, suddenly expired in labour. Dr. Carus found on his arrival that the head of the child was detained in the outlet of the pelvis; he delivered it with the forceps, but not without experiencing considerable difficulty; for the dimensions of the pelvis were rather confined. On introducing the hand afterwards to extract the placenta, he found near the cervix of the uterus "une tumeur variqueuse rompue:" the rent was about an inch long, and the extent of the cavity about two inches all round. The head of the fætus when extracted, was found covered with clotted blood.

*Reflections.* The preceding cases point out the characters of this species of puerperal hæmorrhage, which depends upon a varicose state of the veins of the vagina and neighbouring parts.—The distention of these organs during parturition and the consequent impediment to the free return of the venous blood, sufficiently account for the almost invariable occurrence of the accident either during its progress or immediately after it is over. Perhaps in most cases there is a simultaneous abridgement of the dimensions of the pelvis; or, at least, some existent cause of obstruction to an easy labour, either on the part of the mother, or of the child. We observe from one or two of the cases now recorded that the hæmorrhage may be speedily fatal; and indeed we cannot wonder at this when we consider that there is a free communication between the veins of the womb on the one hand, and of the thigh on the other, with those of the vagina.—*Med. Correspondenz-Blatt.*

## Dr. Bellingeri on Facial Neuralgia.

This distinguished physician of Italy informs us that, in his practice at the hospital of Turin, during the last 14 years, he has had 40 cases of facial neuralgia, affecting either the portio dura, or some of the branches of the trigeminus nerve. The relative frequency of the disease in these two nerves is, according to his experience, certainly very different; for we are told that there were only two instances of the former, viz. the portio dura, being involved; (in one of these it had been caused by a wound of the cheek, and in the other it was evidently connected with some enlarged scrofulous glands in the neighbourhood;) whereas in all the rest, 38 in number, the neuralgia was seated in the latter. The branches of the trigeminus most commonly attacked were the frontal, and the sub-orbital; and it is curious that, with regard to the former, the disease was almost always on the left side; and with regard to the latter, on the right side. When neuralgia affects the frontal or other branches of the ophthalmic nerve, it has, Dr. B. says, much more frequently a periodic or intermittent character, than when the suborbital nerve is affected.

Age appears to have a very considerable influence in predisposing to this disease; for, with the exception of two cases, all the others occurred in patients who had passed their fortieth year. The season of the year, too, has not a trifling agency on the phonomena of the disease. It is in Spring and Autumn that the disease is usually developed. As to the etiology of the cases which occurred in Dr. Bellingeri's practice, we are told that two were of traumatic origin—(in one it followed a fall on the head; in the other, a piece of iron had struck the cheek over the infra orbital foramen;)—that two were caused by sudden frights; (in both the disease was very obstinately prolonged, but at length spontaneously subsided in severity;) two, by the cessation of accustomed sanguineous discharges,—(both cured by an antiphlogistic and soothing treatment;) and that all the other cases were of a rheumatic origin, and attributable to the operation of cold and damp. Very frequently the first attack could be clearly traced to a residence in a low marshy district, or in a house recently finished, and whose walls were not thoroughly dry. Two priests, who successively inhabited the same house, (which was exposed to the westerly winds,) were both attacked with neuralgia, shortly after their residence in it, although they had never experienced the disease before.

A senator went out on the first day of January, 1814, in his carriage, to take a ride. The carriage window on the right side was left open; in the course of the evening he began to feel darting pains in his right cheek, and the disease, which speedily assumed a very severe form, has now continued for the last 20 years. For the first six years the paroxysms were very dreadful; of late, they have subsided considerably in intensity. Another similar case occurred in a lady, who had incautiously exposed herself at a window to a current of cold air. The attack of the disease was almost immediate. For the course of twelve years this patient was subjected to frequent returns of the neuralgia; at length it subsided spontaneously, and has not returned for the last three years.

Dr. B. recognises three distinct sorts or genera of neuralgia—the inflammatory or congestive, the irritative, and the purely nervous. The first of these sorts includes, as a general rule, all those cases that follow the suppression of the menstrual or hæmorrhoidal discharges, or are induced by exposure to cold, repulsion of exanthemata, by wounds of the nerve itself, and in which there is in all probability either a decided phlogosis or a sanguineous engorgement of the affected nerve. It is to be remembered, however, that the disease may continue, and in its most inveterate forms, after all inflammatory or congestive action has ceased. Under such circumstances, the neurilema or substance of the nerve itself has not unfrequently been found organically affected, either by thickening of their substance, or by serous infiltration into it. The following remark by Bellingeri deserves to be impressed on the mind of the practitioner. It has often occurred to him to cure neuralgia by antiphlogistic remedies, although the case had resisted the very same treatment at an earlier period of its course. The very reverse, however, of this proposition is generally found to hold true, for the more ancient and obstinate the disease has been, the less tractable is it usually by the medication now alluded to.

The irritative form of neuralgia, is that which depends upon the irritation of a nerve, either by the contact of some abnormal or foreign substance, such as a decayed tooth, an enlarged gland, &c.; or again, as our author says, "par la retrocession d'un exantheme, ou de dartres, ou enfin de la syphilis;" and he adds, "dans tous ces cas la neuralgie n'est curable qu'autant qu'on fait disparaitre la cause irritante, qu'on rappelle les exanthemes, &c."

The purely nervous neuralgia, (under

which denomination we include all such cases as do not belong to the two former sorts,) has always a type more or less periodic, and therefore may be either regularly or irregularly intermittent. It is certainly not frequent that neuralgia assumes this form from the very earliest commencement of its attack, except in those cases where it suddenly supervenes upon a violent mental emotion; and, moreover, we are to remember, that although purely nervous at first, the disease may, and often does, become of an inflammatory or congestive character at some period of its progress.

As to the "treatment" of neuralgia, the experience of Bellingeri coincides in almost every respect with that of the best practitioners in this country. When the disease assumes a regular periodic form, it is very generally curable by cinchona, especially if, for a few days before the exhibition of this drug, antiphlogistic means and other necessary preliminaries be attended to. By far the greater number of cases in our author's practice were of an inflammatory character, and they almost invariably yielded to bleeding, &c. &c. Extract of henbane, in large doses, has been found by Dr. B. a most useful adjunct. In several cases a most decided benefit was derived from the endermic use of acetate of morphia, by sprinkling it upon a blistered surface. Half a grain every twenty-four hours is a sufficient dose at first; it may be gradually increased to two grains. (En passant, it may be stated that Dr. B. has often cured most obstinate hiccup in this way.) The following case is worthy of record.

A lady, 30 years of age, of a plethoric temperament, but of a very delicate constitution, after a residence of a few months in a damp house, began to experience severe neuralgic pains in the quadratus lumborum muscles of the right side. The pain extended down the corresponding limb, which at times was quite benumbed. The most intense agony was felt over the hip. These paroxysms of pain returned almost every day, and lasted generally for five or six hours, and then gradually subsided, but never ceased entirely;—there was always a feeling of distress in the parts;—no perceptible alteration was observable in the integuments. The treatment adopted at first consisted of rigorous antiphlogistic measures; the patient was bled five times, and the blood was found to be very strongly buffy; large doses of henbane, aconite, quinine, &c. were then exhibited, but all to no effect. At length, a perfect cure was effected by applying a large blister on the part most pained, and sprinkling the denuded surface with two grains of acetate of morphia. Syncope, nausea, and a most disagreeable pruritus of the forehead and nose were induced; but fortunately the neuralgia ceased, and it never returned afterwards.

When we have reason to apprehend any change of structure, either of the nerve itself or of its neurilema, such as thickening, serous infiltration, &c. frictions with the mercurial, the iodine, or the antimonial ointment, may possibly be used with advantage; and the internal exhibition of the kermes mineral, or of the red sulphuret of mercury in union with the extract of henbane or of aconite, should be joined. If these means fail, the section or cauterization of the affected nerve may be tried with some hopes of relief.—*Annali Universali di Medicina.*

## PROFESSOR ALBERS ON INFLAMMATION OF THE SPINAL DURA MATER.

The pathognomonic symptoms of this affection are, according to our author's experience, acute pain, stretching to, and felt chiefly in the lower part of the trunk and inferior extremities; convulsive movements of different parts, accompanied with a trembling or tremulous agitation; difficulty in expelling the urinary and alvine discharges; and lastly, a feeling of tightness or constriction round some part of the body. We shall briefly allude to each of these sets of symptoms in detail.

1. The acute pain in the parts situated below the seat of the inflammation was observed in the examples re-

ported by M. Funk, as well as in those observed by Professor Albers. This symptom has been repeatedly noticed in cases of tetanus. The pain is usually accompanied with a sense of pricking and tearing; and these distressing feelings are in most instances referred to the epigastrium, hips and thighs. In very severe cases so acutely sensitive may be certain parts that even the slightest touch causes excruciating pain and cramps. Now this symptom, or rather chain of symptoms, is not observed, when the arachnoid and pia mater, or when the substance of the medulla itself is affected: under these circumstances, after the pain and convulsive movements have continued for some time, a paralytic weakness usually supervenes. On the contrary, paralysis is certainly not a common result or effect of inflammation of the dura mater, unless the disease has involved the parts situated within its sheath.

2. *Convulsive movements.* When the cervical portion of the spinal dura mater is affected, the muscles of the face and neck are usually drawn into irregular contractions, along with those of the chest and abdomen. The upper extremities are affected more tardily, and sometimes not at all, until a few days before death. It is not, however, unfrequent that severe and irregularly returning pains are felt from the shoulders down the arms; certainly the upper extremities are more generally affected than the lower, when the disease is situated in the cervical region. When the whole extent of the cervical section of the medulla is inflamed, the upper extremities are almost certainly affected; but when the inflammation is limited to its inferior portion, they may escape altogether, or exhibit only a trembling movement or agitation, while the lower limbs are all the time contracted with tetanic spasms. Sometimes the arms are spasmodically affected, while the thighs and legs are paralysed. Under these circumstances, we may expect to find on dissection an effusion of reddish serum within the sheath of the dura mater, at its lower part. As long as the quantity of this serum is small, it may act as an irritant on the cauda equina, and may thus cause convulsions of the inferior extremities; but when it becomes more abundant, it induces, in consequence of the compression, partial or total paralysis.

Professor A. remarks, that the tetanic convulsions which attend inflammation of the dura mater are almost always of the "tonic," and very rarely of the "clonic" kind. The cause of the persistance and intensity of the spasm is no doubt attributable to the irritation, which the diseased envelope exercises on the contained medulla, being constant and not remitting. "Now, this is not the case when the medulla itself or its immediate coverings are affected. The state of high excitement lasts but for a short time; hence the violent convulsions are either from the exhaustion of the nervous energy, or from the compression on the nervous mass, especially followed by paralytic weakness. On the other hand, this state of paralysis seldom occurs in inflammation of the dura mater, except for a few hours before death."

3. *Tremulous agitation of different parts of the Body.* This symptom is usually most conspicuous in the early stages of the disease when the patient attempts to walk. He finds that he cannot keep his head steady for a moment, and that his arms, body, and legs are in a constant tremor. This is one sort of the "paralysis tremens" of Dr. Cooke. It may be observed, that the involuntary action of the muscles we are now alluding to, always ceases when the patient is in the horizontal position. As the disease lasts, this symptom becomes less and less distinctly marked, and either disappears altogether, when a favourable termination may be anticipated, or it is succeeded by a tetanic stiffness or contraction of the limbs. As soon as tetanus begins to appear, the tremulous agitation ceases.

4. *Difficulty in expelling the Urinary and Alvine Evacuations.* In general, the paralytic affections of the bladder

precedes that of the rectum; and, indeed, the latter viscus is sometimes but little affected till within a short time before death. The true nature of the urinary local distress is not unfrequently mistaken at first, and it is only when the bladder has become enormously distended, that the practitioner is made aware of the existing evil.

5. *The feeling of Constriction round the Body.* When the cervical portion of the medulla is inflamed, the sense of constriction is usually experienced round the lower part of the thorax, extending from the dorsal vertebræ to the epigastric region. When the lower part of the dorsal, or when the lumbar division is the seat of the disease, this symptom is remarkable chiefly in a line, running almost parallel to the anterior and superior crista of the os ilii. The sense of constriction is not unfrequently accompanied with positive pain; it is always an unfavourable sign, as it indicates the intensity of the inflammatory action. When once established, it is, even under the most fortunate circumstances, very obstinate of removal.

In concluding these remarks on inflammation of the spinal dura mater, we may state that the functions and faculties of the brain may remain uninjured, under the most serious disease of the medulla spinalis.—*Graefe und Walther's Journal fur Chirurgie, &c.*

## SINGULAR CASE OF EPILEPTIC HYSTERIA, IN WHICH THERE WAS A STRANGE PROPENSITY TO A RAPID PROGRESSION, AND THEN TO ROLLING OF THE BODY DURING THE PAROXYSMS.

A man, 26 years of age, of a sanguineous and extremely irritable temperament, and who had been much addicted to debauchery and other excesses, was ten years ago seized with convulsions of a very extraordinary kind. The paroxysms came on sometimes during waking—at other times during sleep; the patient would, all on a sudden, scream out, and lose all consciousness; he then began to run rapidly forwards, turning neither to the right nor to the left, nor stopping at obstacles which he could possibly overcome. This "course rapide," if not checked, continued for a few seconds; the distance which he usually went being 20 or 30 paces. On recovering from the attack, his mind seemed composed, and he was not at all aware of what had taken place; he only recollected that, when his consciousness was leaving him, he experienced a sort of "aura" creeping up from his toes, along the back, until it reached the head. During a period of nearly seven years, these curious paroxysms returned at irregular intervals; often, indeed, there were two in the course of 24 hours—at other times there was a much longer space between them. Their character became gradually altered, and, instead of the patient being impelled to a rapid progression, he now, during the attack, fell insensible at once on the ground, and began rolling himself fairly round about, for twelve or fourteen times; when this singular propensity ceased, his consciousness returned by degrees. During the continuance of the paroxysm, the patient kept constantly screaming out. For the last two years or so, these paroxysms have been more frequent, and also more lengthened; and usually, when the rolling has ceased, irregular and very bizarre contractions of different parts supervene. The attacks are more common at night than during the day, and while the patient is asleep than when he is awake. It is seldom that an entire day passes over without one or more paroxysms.—*Il Filiatre Sebezio.*

## NEURALGIA OF THE LEG AND FOOT—SECTION OF THE SCIATIC NERVE.

A man aged 31, had his right foot injured by a wheel passing over it. Under proper treatment he quickly recovered from the effects of the severe contusion, and he experienced but little inconvenience for the space of five years. After the lapse of this time, on accidentally hitting the toes against a stone with considerable force, he was forthwith seized with a sharp, darting pain in the foot and leg; this pain lasted only for a few minutes, and then it subsided; but, unfortunately, any movement of the limb threatened to re-induce it. From this date may be reckoned the commencement of all his subsequent sufferings. During the following three years, whenever he attempted to walk, he experienced a dreadfully lancinating pain on the dorsum of the right foot, and affecting all the toes: in the fourth year, the pain became still more severe, and extended to the sole of the foot and os calcis. The paroxysms usually recurred several times in the course of the twenty-four hours, and during their continuance the agony was almost insufferable. All sorts of treatment had been tried, but, alas! with very little relief.

In 1827, Dr. Malagodi first saw this patient:—he found the right leg considerably atrophied, but exhibiting no outward traces of inflammation, or other disease; the attacks of pain usually came on without any warning. All on a sudden, the patient was seized with an excruciating pain, which forced him to stand still, and remain in the same attitude for upwards of an entire hour; if he attempted to move, the limb became affected with spasms and convulsions; he was obliged to use a crutch on all occasions. His general health had suffered materially—his appetite failed, and his sleep was much disturbed.

The circumstance of the utter failure of every remedy which had been tried, determined Dr. M. to perform the section of the sciatic nerve. An incision, about three inches long, was made through the integuments, on the lower and back part of the thigh; the fascia lata was then slit up in the same direction, and the two masses of the flexor muscles being separated from each other, the nerve was exposed, and then divided in two places, viz. at the upper and at the lower angle of the wound. A tremor suddenly seized the limb, and the patient became faint; he afterwards described that he had felt a pain shoot from the wound along the vertebral column, to the head, at the moment of the division of the nerve, and that, immediately afterwards he lost all consciousness. When he recovered his sensibility, he found that he had lost all power over the limb, and that there was a feeling of weight and of formication all over it. For eight hours after the operation, there was an entire absence of suffering; then he felt a pricking twice or thrice in the foot, extending from the sole to the dorsum of the foot. On the following day, as he experienced a very severe pain on the outer side of the affected leg, a venæsection was practised. On the third day a feverish irritation came on, and this state lasted for five days: "on pratiqua six saignées," and exhibited purgatives and antimonials. During all this time, the pain in the right leg continued obstinately—sometimes it was felt in the wound itself, and along the course of the sciatic nerve. The repeated application of leeches to the limb brought great relief, and a decided amendment seemed now to have taken place. By the end of the seventh week, the patient was able to walk about, without experiencing any suffering, and, moreover, without the assistance of any support; his general health gradually became quite re-established. The wound was not entirely healed till the end of the fifth month after the performance of the operation.—*Annali Universali, Aprile*, 1834.

---

## TWO CASES OF SUCCESSFUL TRANSFUSION OF BLOOD IN UTERINE HÆMORRHAGE.

*Case* 1.—A woman, 41 years of age, and mother of several children, was seized after a suppression of the catamenia during three months, with a "perte uterine," which soon became alarming, from the profuseness of the discharge. It had continued for 18 hours, when Dr. Klett was called in. He found the patient in a state of extreme exhaustion; a vast quantity of blood must have been lost, as it had soaked through the bed, and quite inundated the floor.

Various cordials and stimulants were immediately exhibited, and astringent injections were thrown up the vagina; but the deadly paleness of the face and coldness of the limbs, the singultus and hiccuping, &c. sufficiently indicated the necessity of some other expedients being tried. Two ounccs of blood (procured from the husband's arm) were immediately injected into the cephalic vein; the result was very surprising—the patient at once opened her eyes, the pulse became distinct and moderately strong, the syncope and hiccups ceased, and a pleasant warmth was diffused over the whole body. The medicines formerly used with no benefit, were now administered with the happiest effects, and it only required a steady perseverance in them to complete the cure. The patient, on being asked what sort of sensations she had experienced from the injection, replied—"qu'elle avait ressenti manifestement le mouvement d'une circulation de chaleur se portant vers le cœur, et qu'elle devait consacrer sa nouvelle vie à conserver la mienne; ce sont là ses propres expressions!!"

*Case* 2.—When Dr. K. was summoned to the relief of this woman, the flooding had lasted for upwards of ten hours. She was in a most alarming condition, and "faisait ses derniers adieus d'une voix foible et entrecoupée, et elle resemblait la morte."

About two ounces and a half of blood, drawn from the arm of the husband, who was "fort et bien portant," being injected into the median cephalic vein, "la vie parut se ranimer, comme par une commotion electrique." The recovery was slow, but ultimately quite complete.

## PROFESSOR BOUILLAUD'S REFUTATION OF MAJENDIE'S THEORY OF THE SOUNDS OF THE HEART.

In some of our recent Numbers, we have alluded to the substance of M. Majendie's memoirs on the double sound, or tic-tac, which accompanies the alternate motions of the heart. The theories of Laennec himself, and, subsequently, of Drs. Bouillaud, Bertin, Hope, Corrigan, and others, referring the cause of this acoustic phenomenon either to the tremor of the muscular fibres of the heart, to the alternate closing and opening of some of its valves, to the impulsion of the current of the blood on the inner walls of the cavities, &c. have appeared unsatisfactory to the distinguished physiologist of Paris, and he has been, therefore, induced to push his own boat off into the waters of speculation, with the full hope, no doubt, of being a more fortunate fisherman of the truth.

M. M. is of opinion, that the tic-tac sound is owing to a "double choc qu'exerce le cœur sur les parois du thorax; l'un de ces chocs ayant lieu par la point de l'organe à l'instant de la contraction des ventricules, l'autre par sa face anterieure au moment de leur dilatation." This explanation has the merit of apparent simplicity, and one might, on a passing examination of the subject, be inclined to admit its accuracy; it becomes, therefore, and for this very reason the more necessary, to disabuse the minds of those who have not attended minutely to the physiology of the heart's action (a subject which, since Laennec's immortal discovery, has, perhaps, been too much insisted upon by some physicians, and occupied a too exclusive share of their attention) of the fallacies of M. Majendie's theory.

Professor Bouillaud has done this very ably, and we cannot do better than give a short abstract of his memoir, in reply to M. Majendie's, recently read at the Royal Academy of Medicine.

We may premise, that the experiments of Dr. Hope, in the first instance, and subsequently of the Parisian Professor, afforded, among other results, the almost unanswerable objection, that the sounds of the heart were distinctly heard after the chest of an animal had been laid fairly open, and when, therefore, there could not possibly be any shock or impulsion against its parietes. In following out his argument, M. B. rests considerable weight on the occurrence of the unnatural or abnormal sounds, either merely accompanying or altogether superseding, the ordinary tic-tac heard in a healthy state of the viscus; "for since (says he) the abnormal sounds are clearly referable to certain abnormal states of parts of the heart itself, and since the abnormal sounds often quite supersede, and, as it were, take the place of, the healthy or normal sounds, we may reasonably believe that the normal sounds, also, are due to the same cause." The causes of the abnormal sounds are threefold:—

1. They may depend upon certain organic changes of the lining membrane, or of the valves of the cardiac cavities: of these changes, the most frequent and best known is induration of the valves, and the consequent impediment to their free play, and the contraction of the valvular orifices. To this source we attribute the blowing, bellows, saw, rasp, file, and whistling bruits of the heart. M. B. says that the last named bruit is sometimes so remarkable, as to resemble "le cri d'un oiseau."

2. Lesions of the pericardium may give rise to abnormal cardiac sounds; for example, when the two opposed surfaces of this envelope become uneven and irregular, the friction of the one surface upon the other may occasion either a sort of diffused and superficial rasping bruit, or else a sound resembling the crackling of new leather. When there is a considerable effusion into the bag of the pericardium, the cardiac sounds are rendered more dull, and they are heard as if they were more remote from the ear. In a case which was recently under M. B.'s care, a most distinct grating, or scraping sound was heard, during the whole time the patient was in the hospital; the patient died, and, on dissection, an osseous concretion, projecting from the surface of the pericardium, was found.

3. Lesions of the muscular substance of the heart, or of "son principe excitateur" (in consequence of which the impulsions of the organ against the thoracic parietes are rendered either more powerful or more feeble) modify considerably the ordinary cardiac sounds. As the impulsion is coincident only with the systole of the heart, this third set of abnormal sounds must, it is evident, correspond with the contraction, and not with the dilatation of the organ. In several cases, the sound, caused by the shock of the heart against the thoracic parietes, is of a remarkably clear, silvery, metallic resonance. In concluding his remarks, the learned Professor very justly re-urges his former proposition, "that if the sawing, rasping, and other such abnormal sounds, are modifications only of the healthy tic-tac of the heart, is it not reasonable to believe that this tic-tac depends itself upon the same essential or original causes, viz. the play of the cardiac valves, and the current of the blood through the valvular orifices."

M. Majendie, indeed, says that a narrowing of these orifices prevents sometimes the first—at other times the second, impulse or shock of the heart; and that it is to this cause, viz. the absence of the twofold impulsion, that we must attribute the absence of the first bruit, in the one case, and of the second bruit in the other. In reply to this statement, M. Bouillaud asserts (and his assertion is doubtless conformable with the experience of other physicians) that in a multitude of cases, in which the cardiac orifices were proved by dissection to be contracted, the impulses of the heart had been, during life, not only not impeded, but on the contrary, had been much stronger than in a state of health.

Whoever will attentively examine for himself the acoustic phenomena of the heart's action, will be at once satisfied, that the sensations produced by the shock of the heart against the thoracic parietes are, although simultaneous, or nearly so, with the proper cardiac bruits, quite distinct and independent from them.

It is altogether curious to observe the conflicting discrepancy among medical men, not only in their trains of thought and reasoning, but also in their observation and perception of phenomena cognizable by the senses. One argument on which Majendie rests considerable weight, for support of his doctrine, is, that according to his observations, the "shock, as well as the sounds of the heart, when this viscus is hypertrophied, are always enfeebled, and sometimes altogether nullified," and the reason he assigns is, "qu'à aucun moment il n'existe plus de distance entre lui et la paroi pectorale." It is almost unnecessary to state, that the observations of other physicians are diametrically opposed to those of M.M.—*Journ. Hebdomad.*

---

## SECALE CORNUTUM, AS AN EMMENAGOGUE.

*Case* 1. A girl, 16 years of age, had for several months suffered from general malaise and cachexy; the abdomen had become tumid and hard, the limbs much emaciated; there was a complete anorexia, and great debility.

Every evening between five and six o'clock she had a pyrexial attack, which lasted for a few hours and then abated. This girl had menstruated only once in her life time, and that took place about two months before she was visited by Dr. Rollet.

As there was some degree of tenderness in the epigastric region; a dozen of leeches were applied there, and febrifuge medicines were administered, with the view of obviating the evening paroxysms; but these seemed after a few days perseverance in this mode of treatment rather aggravated than relieved: leeches were then ordered to the vulva, hip vapour-baths to be used night and morning, and sinapisms to be applied to the feet and thighs: no benefit was however obtained. Dr. R. had now recourse to the secale cornutum. Two drachms were infused in a litre (about two pints) of boiling water, for the space of an hour; a small coffee cupful was ordered to be taken every half hour: the effect seems to have been very speedy; for we are told "que la mere de la malade, trouva comme moi, une notable difference dans la vitesse du pouls!" within the first hour. (English physicians are not much in the habit of confirming their observations by the testimony of either the "pere" or the "mere.") Let it not be supposed, after this, (we transcribe the "ipsissima verba" of the doctor) that the action of the secale cornutum is gradual and tedious, or that it operates more on the womb than on the entire nervous system. The frequency of the dose was diminished in proportion as the pulse became slower and slower. A dose every two or three hours was after a short time deemed sufficient.

The evening paroxysms of pyrexia were arrested, and signs of general improvement were speedily visible. Fifteen days after the commencement of the remedy, the catamenia returned; and although their subsequent recurrence was not quite regular, the patient's health became most satisfactorily reestablished.

*Case* 2. A robust healthy young woman had for five or six years been very irregular; before each period she suffered much from intense headache, congestive fulness of the neck, vomiting, and severe colic. Venesection and the other usual means resorted to in such cases brought only temporary relief. The secale cornutum was therefore ordered before an expected period: a drachm to be infused in a litre of water, and a small cupful to be taken every hour: on the second morning the menstrual discharge was induced, and continued for several days. For several successive periods this treatment was adopted, and always with entire success.

*Case* 3. A lady 23 years of age, of a very nervous temperament, and hitherto "bien reglée," received a severe shock to her feelings by a melancholy accident to a friend at a time when she was unwell; the catamenia were immediately arrested; and from that period her general health became seriously indisposed. For several months there was no reappearance of the menses. Dr. R. prescribed the secale cornutum as in the preceding case: the medicine was taken in repeated doses for two days; most of the nervous symptoms were very speedily relieved, and at the end of a week the catamenia were induced. This patient had recourse to the ergot for several successive periods, and uniformly with the same satisfactory results.—*Journal Hebdomadaire.*

## III.

## CLINICAL REVIEW.

### ST. GEORGE'S HOSPITAL.

### ABSTRACT OF A LECTURE ON INJURIES OF THE NERVES, DELIVERED BY MR. CÆSAR HAWKINS.

WE are indebted to the kindness of Mr. Hawkins for the following highly interesting remarks on an interesting subject. The lecture from which they are extracted is one of those delivered by Mr. Hawkins in the school of St. George's Hospital.

The next class of injuries which we have to consider are those which are inflicted on *nerves*, which form a very curious and interesting subject, in consequence of modern investigations into the connexions and functions of these parts. Every case perhaps will present to you some new and peculiar feature, and hence probably it happens, that no practical division of them has been made with which I am acquainted; and yet I think it will be found that there are some general effects resulting from injuries of nerves, which usually allow of their being conveniently placed under two heads, according as the nerve has been *partially injured* only, or *totally divided*. I do not know that such a distinction has anywhere been drawn, but I think that, as a general rule, it will hold good, and suffice to guide you towards the proper remedial agent.

1st, then, as a general rule, partial injury or slighter bruises, or moderate pressure, will be followed by excited circulation in the nerve, inflammation, acute sensibility, and increased heat, spasms of muscles, and other evidence of *augmented nervous energy*

2dly. Complete division of a nerve, or great pressure, will usually be attended with loss of function in the injured nerve—diminished temperature—paralysis of the muscles—loss of sensibility, and impaired vitality in the parts which are thus cut off from their natural connexion with the sensorium; unless, thirdly, inflammation be induced subsequently to the injury, in which the symptoms of the two sets of cases will be mixed.

1. The excitement of a nerve from partial injury may be confined almost entirely to the situation of the injury, or to the parts supplied by the nerve, or the effects may be more extensive, reaching to the origin of the nerve in the spinal marrow or the brain, or in a higher degree, still, the whole body may be deranged by the injury, and the powers of the mind weakened and impaired.

A young woman came to me with violent pain in a small cicatrix, which appeared to involve the dorsal branch of the ulnar nerve, the pain sometimes reaching the shoulder; the cicatrix itself was exquisitely tender, and pressure on any part of the ulnar nerve, even in the axillary plexus, caused considerable inconvenience. By a blister to the spine and purgatives the pain was removed except from the cicatrix, and this also was subsequently cured by belladonna liniment, and by galbanum pills with colocynth.

A young woman was in the hospital under the care of Sir B. Brodie some years ago, who had been bitten in the back of the forearm by a dog two months previously. This gave her violent pain for three days, and continued more or less during the whole time. For a fortnight before her admission the head had swelled, with greater pain in the cicatrix and in the head;—she could bend her fingers but not extend them, and could not use her thumb at all, which was the most painful, and nearest to the cicatrix, which seemed to involve a part of the external cutaneous nerve;—and within the last day or two the pain had begun to extend towards the axilla. Sir B. Brodie cut out the painful cicatrix, and all the symptoms were at once removed.

In an interesting paper by Mr. Earle,

in the Med. Chir. Trans. on the influence of the nerves on animal temperature, he relates an instance in which a prick of the external cutaneous nerve, half-way down the fore-arm, was followed by repeated attacks of local inflammation, with the large bullæ of Pemphigus, and the heat of the part was actually three degrees higher than under the tongue. In these cases the irritation of a cutaneous nerve was the cause of nearly local symptoms only, but if the system be disordered, the effects of an injury even of a superficial branch may be nearly universal.

A woman was in the hospital, who had been bled in the forearm. The operation was attended with much pain from an injury, no doubt, of a cutaneous nerve. The pain shortly extended below and above the cicatrix;—soon the fingers and hand became contracted and immoveable—spasms extended upwards to the neck and head—soon afterwards the whole of the same side of the body became affected with convulsive spasms—and on her admission even the opposite side of the body was partially affected in the same way. This woman's digestive organs were much deranged, and by attention to their functions the nervous symptoms were almost entirely removed. Several cases resembling the last have been related by Mr. Abernethy, which were produced like that by bleeding.

2. Partial injuries of the deeper and muscular nerves are succeeded by the same evidence of excitement as when the smaller and superficial branches only are inflamed. A woman was under my care in the hospital, who had partially divided the ulnar nerve close to the wrist by breaking a glass window. The wound quickly healed, and I desired her to return to me if she felt any thing unusual in the hand. A month afterwards she came back, complaining of violent pain in the ulnar edge of the hand, especially on the back of the metacarpal bone of the little finger, and the whole course of the ulnar nerve and the axillary plexus above the clavicle were exquisitely tender and painful. She could not move the fingers, and the temperature of the ulnar side of the hand was higher than natural. She attended for a long time as an outpatient before I could afford her any relief.

A very interesting case has been related by Dr. Denmark of an officer, who was wounded at the siege of Badajoz in the arm. This gentleman suffered the most excruciating pain and burning, which were aggravated by the least motion, and the elbow and wrist were contracted and bent; he had violent starting of the limb, and suffered from frightful dreams. The little finger however was free from pain, and a small tumor was felt in the median nerve at the bottom of the wound. The arm was amputated, and a small piece of the ball was found embedded in the median nerve.

I have thus related to you several cases of partial injury, no two of which, you will perceive, are exactly alike, although they all agree in presenting evidence of either general or local *nervous excitement.*

If the symptoms are nearly confined to the injured part, local means alone will sometimes enable you to relieve the patient—cold lotions, such as linen dipped in æther or spirit of wine—or opiates, such as infusion of tobacco or solution of opium, a drachm in eight ounces of water—or a belladonna plaster—or a liniment composed of one-third of extract of belladonna, with two-thirds of a spermaceti or other cerate. Sometimes a few leeches are desirable when the temperature is high, and after this has been reduced, without entire subsidence of the pain, a small blister, or tartar emetic ointment.

May the affected portion of nerve be removed by operation as in one of the cases I have related? Certainly it may, when there is a cicatrix or tumor shewing the exact seat of the pain, provided 1st, that the nerve is a *superficial* one, for the operation must not be performed where a deep or large and muscular nerve is affected; as the remedy is worse than the disease, for reasons which will presently be evident to you. And provided, 2dly, that the pain and other symptoms are *local* only, without *general affection* of the system; for if the general health be deranged the operation is highly improper. Either the principal cause is in the general health, and by attention to this cause, whatever it may be, the local symptoms may be subdued, and the removal of the portion of nerve rendered unnecessary; or, if such an operation be performed before the general health is corrected, the same symptoms will in a short time return in connection with the end of the nerve nearest to the brain, or by branches of communication being formed between the two ends of the nerve, or between the lower end of the divided nerve and some other neighbouring branch—or else, and perhaps more frequently, if there be much excitement, the patient's sufferings may be immediately aggravated in degree, or by the addition of new symptoms.

If, then, in any case of nervous excitement from partial injuries, the general health is disturbed, you must endeavour to ascertain whether the disease has originated in the derangement of some particular function—the digestive—or uterine—or if the patient be only of that peculiarly nervous temperament which is usually called hysterical, and you must correct these different conditions just as you would in a case of tic douloureux, without injury of a nerve. Most frequently the digestive functions are improperly or inadequately performed; let your patient take therefore 5 or 10 grains of comp. aloetic pill every night, or ten grains of aloetic pill with myrrh twice daily—or an ounce of comp. decoction of aloes with five grains of carbonate of ammonia, and some camphor mixture or light bitter—or let him take 3 grains of blue-pill and 8 or 10 of extract of rhubarb every night, with light bitter infusion of calumba or cascarilla, with infusion of senna twice a day—or some ammonia or carbonate of potassa with bitter medicines, or with bark.

After a course of purgatives, if they are required, steel has great power—an ounce of steel mixture, or half a drachm of carbonate or tartrate of iron twice or thrice daily, or 10 grs. of comp. steel pill with 5 of myrrh, and aloe pill three times a day, in conjunction with a shower-bath or cold bath.

Sometimes arsenic relieves the state of system on which the nervous symptoms partly depend, from three to eight drops of liquor arsenicalis thrice daily, with some camphor mixture or aromatic, or with decoction and extract of sarsaparilla, or with some alkali added, magnesia or solution of potassa, where the common form of arsenic disagrees. Sometimes one or two grains of sulphate of zinc with extract of hemlock thrice a day, or some oxyde of bismuth will be of service.

Now and then the pain requires narcotic; acetate of morphia or opium when it is severe, and occasionally, but not very often, the symptoms will yield to the extracts of stramonium or belladonna internally, from one to three grains of stramonium, or from half a grain to a grain of belladonna three times in the day. I have much less faith, however, in the internal administration of opiates than I have in their external use. In fact, all the local applications I have already mentioned are to be conjoined with internal means.

But, further, in some cases you may do much good by occasionally cupping or leeching on the part of the spine from which the affected nerve arises, and which is often tender and painful. Even a blister or belladonna plaster is sometimes of more service on the loins or neck than on the affected nerve itself, though I am not inclined to look for the cause of nervous pains in this part of the body, so often as some modern authors would lead you to do.

3. I remarked just now that, if a portion of nerve was cut out, the same symptoms frequently returned at the upper end of the nerve; that is to say, besides the more immediate effects of complete division of a nerve, you may have irritation established with vascular excitement in the part nearest to the brain. This however is chiefly in the smaller and superficial nerves, and the curious though well-known phenomenon is then observed of the reference of the pain by the patient to the parts originally supplied by the nerve, so that

pain may be apparently excited in the toes or fingers years after a limb has been removed by amputation. This circumstance will be generally in cases where, after amputation, the end of the bone has exfoliated, or the stump has, from any other cause, been kept in a state of inflammation, or the nerve is involved in the cicatrix, and the case exactly resembles one of excited action, from partial injury, and requires just the same attention for the removal of the symptoms.

But, further, the consequence of long-continued irritation in any injured part of a nerve, when entire, or in the extremity of a divided nerve, produces a bulbous enlargement, with a separation of the nervous filaments from one another, by deposits of organized lymph into the neurilema, the tumor which is thus produced being exquisitely tender to the touch, and the pain produced by it being so severe, as seriously to impair the patient's health. Here is a preparation in which you may see all the nerves of the arm in this condition, after amputation above the elbow, the end of the humerus having a small piece of dead bone attached to it. Here, again, is the same appearance at the upper end of the median nerve, which had been divided by a wound across the fore-arm. Where, then, such tumors form after amputation, a second amputation is sometimes necessary, for the same reasons, aad with the same precautions, as when a partially-divided nerve is involved in a cicatrix. Mr. Langstaff has lately published a paper, in which he attributes the occurrence of these bulbous tumors of the nerves in stump to the circular method of performing the operation, and thinks it can be avoided by the flap operation. I do not think, however, that there is any reason for supposing that it is the result of any thing more than inflammation, and, therefore, that in a healthy person, and a well-formed stump, it is not likely to take place from one operation more frequently than from the other; it may, indeed, be a reason for shortening a large nerve, whenever there seems any danger of its adhering to the line of union. It is, however, but a rare circumstance, either in amputation, or in any other injury of nerves.

4. If a ligature is tied tightly round a nerve, the same effect is produced upon the parts which are supplied by the nerve as if it had been wholly divided; but the influence upon the nerve itself is the same as when inflammation takes place, either in a partially-divided nerve or in one which has been cut across, but has been subjected to inflammatory action afterwards. The effect, therefore, will be to cause much local or general irritation, and, at last, a bulbous enlargement forms, as the result of the inflammation upon the upper part of the nerve. It is somewhat remarkable that, in such a case, the tumor does not form on both sides of the ligature, though the nerve might be expected, from analogy with other structures, to inflame equally, above and below, the irritating cause; but, as far as I know, it is produced in that portion only which is connected with the brain or spinal marrow. A very interesting case is related by Dr. Hennen, illustrating the effects of ligatures on nerves, in the person of a General Officer, whose arm was amputated, and several nerves of the axillary plexus tied with the arteries, the ligatures being, of course, a long time before they could be detached. The pulling one of these ligatures would cause pain to be referred to the fingers of the amputated member—of another, in the thumb, or in the elbow, or in the wrist. The pulling of one ligature would not always cause pain in the same part, but the supposed situation of the pain would vary, according to the manner or the direction in which it was moved, so that, if it was dragged downwards, the pain might be referred to the fingers, but if inwards, to the elbow;—and if it was dragged roughly, the whole of the lost limb would seem to be in much pain, and pain would extend upwards to the head, with fainting and general suffering.

5. But let us suppose that a large nerve has been wholly divided, without there having been any local irritation or general derangement of the system of the patient to occasion inflammation in the nerve, like that which almost

always attends partial injuries of this structure. The effects of such a division will be immediate and remote. As soon as the injury has been inflicted, there is necessarily an instant deprivation of sense and voluntary power in the parts supplied by the nerve, so that, if nothing more remarkable took place, the affected part would become wholly useless, and would shrink and waste for want of exertion.

It would appear, from the experiment of Haighton and Cruikshank, and other physiologists, that when a nerve is simply divided, the cut ends will unite, and the functions of the part would be restored after some time; and such is doubtless the case with the smaller nerves at least, so that, when a nerve has been divided in tic douloureux, or other nervous pains, the part, though numbed for a time, soon regains sensation, and the disease consequently returns again. If you examine a nerve, which has thus united after union, you will perceive, indeed, that the structure of the uniting medium is not like nerve, but that the nervous energy is transmitted through a tough cellular, or half ligamentous structure, not very unlike the substance which unites the divided ends of muscular fibres, though not so dense. It is very curious, however, that not only is this new substance capable of transmitting nervous influence from the upper to the lower end of a divided small nerve, though not itself possessing the appearance of nervous matter, but even when a nerve has had a considerable portion actually cut out, a restoration of power may take place, partly by the intervening cellular substance, but in part, also, from the actual formation of new nervous fibrils, shot out from the divided ends and uniting them together, or forming anastomoses with some neighbouring nerve. In the person who had this bulb, formed upon the upper part of a divided median nerve, there was an interval of full three inches between the two ends, for the lower end had been turned down in a loop towards the wrist, where it had been fixed, and yet the muscles of the thumb and fingers seemed to have regained their power, because some small anastomosing branches had been formed, which came across from the superficial branch of the muscular spiral nerve. Mr. Swan verified this fact in several cases, in which he had divided the cutaneous nerves of the leg for very painful varices of the veins; and general experience in the operations which have been performed for tic douloureux of the fifth nerve, in the face, proves the restoration of sensation, and the inefficiency of all such operations, except as temporary palliatives. But, although the case I have just mentioned would appear to shew, that a nerve, of the size of the median nerve, may have the functions of the parts supplied by it restored in these two ways, yet unquestionably you must not expect it in the larger nerves, except in some very rare instances; there is, in general, no return either of sense or motion, or, occasionally, the sensation may be partially restored, while the locomotive power is not in the least recovered. It would seem, too, as if, in any nerve, the power of regeneration is less likely in man, than in other animals on whom experiments have been instituted.

If the nervous influence of a part has been destroyed by *pressure only*, as by dislocation of the clavicle or humerus, even then a very long time will sometimes elapse before the patient can again use the arm, the restoration being, however sometimes hastened by friction, by blisters, or tartar-emetic ointment, or electricity. But if it is lost by entire division of a large nerve, the case is hopeless; and, if the extremity have only one nerve, as the ischiatic or popliteal, the patient drags a useless limb, which is an actual incumbrance that amputation alone can remove. You will find some interesting observations by Mr. Guthrie upon this point, in one of his works—that on Gun-shot Wounds I think.

But not only are sense and motion lost by the entire interruption of the course of nervous influence—there result also from such an injury some more remote effects, which are highly interesting. Such a case as this is very common, and shews you that the division of even a small nerve becomes the source of a good deal of distress and inconvenience to the patient. A man came into the hospital under my care, in consequence of a wound of the wrist, which he had produced by some broken glass, and which, besides other unimportant injury, had cut across that part of the median nerve which supplies the fingers, leaving those branches entire which supply the thumb. There was, of course, instant deprivation of sense in the fore and middle fingers, and in one side of the ring finger, and even the power of motion was in some measure impaired. The wound quickly healed, however, and he left the hospital; but about a month afterwards, the weather happening to become cold, he returned, because two fingers had inflamed, and the cuticle and nails had separated, and portions even of the cutis had sloughed. This mischief was quickly repaired, however, but he remained constantly liable to the same inflammation.

In fact, then, the effects of entire division of nerves is a loss of the power of regulating *the heat* of the parts which have lost their nervous energy, and a diminution of their vital powers. They are incapable of resisting heat and cold, and they inflame and die from injuries which would not be felt if the nerves were not divided or interrupted. The patient I have just alluded to produced sloughing, by washing his hands in some by no means very cold water, and any one whose hand or fingers are in the same condition cannot use either hot or cold water—he cannot handle a piece of metal or marble, or any other good conductor of heat, the temperature of which is at all higher or lower than his hand; he cannot warm his hand at the fire, or do any action of this kind without destruction to the parts, which cannot regulate their supply of animal heat in the usual manner. At the same time, the vitality of the parts is materially lowered, independent of the effects of changes of temperature, so that bruises or pressure which can be borne with impunity in a healthy part, are followed by ulceration, and sloughing, and abscess. All these effects of loss of nervous influence are seen, on a large scale, in cases of injuries or diseases of the spinal marrow, where the patient is so frequently carried off by sloughing or abscesses of the nates or legs, or by inflammation of the bladder, and where the injury to the nervous influence produces, also, some other very curious effects, which, from their greater importance, and from their being more complicated, are more interesting still than the simple effects of the loss of power in a single nerve. Of these I shall have to speak in a future lecture.

These singular phenomena are not to be attributed to loss of sensation only, rendering the patient incapable of guarding against pressure or changes of temperature, of the existence of which he is not aware; but the vitality is *actually lowered*, and the effects are, therefore, invariable and constant, and you must always caution your patients strictly against exposure to any of those circumstances which may act upon the injured parts.

It appears to me, moreover, that the effects I am describing to you depend, for the most part, upon the *sensitive* portion only of the nerve, and not upon the motive part. The veterinary surgeon knows that his horse, the *cutaneous* nerve of whose foot has been cut to relieve it from a painful disease, will always slough and ulcerate, so as more than to balance any advantages derived from the operation. In M. Majendie's experiment of cutting the root of the fifth nerve, the nerve of sensation to the head, the surface of the eye in a few days ulcerates, and the eye is destroyed. And I have had occasion to point out to you the phenomena in question, as a mode of diagnosis between disease of the spinal marrow and of the bones of the spine, *i. e.* if there is sloughing and loss of temperature, the disease is probably in the spinal marrow, since, in ordinary caries of the spine, the disease being in the bodies only of the vertebræ, the irritation is not propagated to more than the anterior part of the spinal marrow, which is nearest to the seat of the caries, and, therefore, although there may be total paraplegia, the functions of the posterior half of the spinal marrow are unimpaired. So, again, in hemiplegia, dependent on disease of the brain, you do not meet with sloughing, and there is very little difference in the power of regulating the temperature of the affected half of the body.

Observe in these curious cases, too, this fact.—The temperature is not only adjusted to surrounding objects, but it is *actually lowered* considerably below the natural standard. I have only seen it eight degrees below what it should be, but it is sometimes much more than this; in the paper by Mr. Earle, in the Med.-Chirurgical Transactions, which I have already alluded to, he mentions a case in which the affected arm was 70° only, while the other was at 92°, a difference, it will be observed, of 22°. And this case shewed the want of regulating power in this way; they were both subjected to electricity, but while the heat of the sound arm was not raised, but remained stationary at 92°, the temperature of the paralysed arm was elevated from 70° to 77°.

In this respect, there is generally a great contrast between partial injuries, in which there is almost always inflammation, and cases of total division, in which inflammation is rare, except at first; in the case of inflamed nerve, therefore, the temperature of parts supplied by the nerve is as many degrees higher than the natural standard, as, in the other case, it is below what it ought to be. The analogy between injuries of the spinal marrow, and of the nerves derived from it, is here, also, kept up, as the temperature of the parts below the injury is generally several degrees above that of the upper part of the body; I am not aware, however, that the temperature of the parts below an inflamed nerve is ever higher than that of the interior of the body; while I have seen it, in a case of injury of the spine, as high as 111° just before death.

It would appear, too, that these effects upon the vitality of a part are as permanent as they are curious; many years, at all events, elapse, and leave the patient still suffering from them.

What I have thus remarked to you is sufficient, I trust, to shew you the propriety of the limit I mentioned, in operations for painful affections of the nerves, viz. that no good surgeon should think of cutting any nerve, except the small and superficial ones, because the remedy is worse than the disease. It has been done, before the surgeons were as well aware of the consequences as they are at the present time, and the effects were just what I have enumerated.

Mr. Earle some years ago cut the ulnar nerve, behind the elbow, in a young woman who had a painful affection of the little finger. She experienced the benefit that was expected from the operation, and was completely relieved from her pain; but then, besides the loss of sensation and of motion, which were anticipated, she suffered, in a way that was not expected, from constant attacks of inflammation in the fore-arm. Five years afterwards, these effects still remained, and the temperature of the little finger was then four degrees lower than that of the other, which was the same difference that existed soon after the operation.

I have very little to say to you as to the treatment of this class of cases, for, unfortunately, we have little power of doing more than cautioning the patient against exposure to changes of temperature, by appropriate clothing, and by avoiding every thing which is likely to excite inflammatory action. A little good is done, if there is pain, by opiate applications and Goulard's extract, and a distressing feeling of numbness is relieved by touching the affected part with camphorated spirit, or sulphuric æther; but there is no room for that variety of remedies which are required, and which are beneficial in the other class of partial injuries, with excited circulation and augmented nervous influence. One curious part of these cases, however, is, that although the parts deprived of their due supply of nervous influence will inflame and slough so easily, yet the sloughs separate, and the ulcers granulate and cicatrize, and the abscesses fill up very readily, so that there is no difficulty, with the usual attention, to repair the mischief which has been produced, unless the vast extent of the sores destroys the strength of the patient, as it so often does with injuries of the spine.

---

## CHARING-CROSS HOSPITAL.

### SURGICAL REPORT.

### FRACTURED RIBS—LACERATION OF THE HAND AND ARM.

Eliz. Wall, æt. 71, a robust woman, of temperate habits, was admitted into the hospital under the care of Mr. Pettigrew, Feb. 5th, having been knocked down and ran over by an omnibus, the wheels of which passed over her chest and hand. Two ribs were fractured obliquely under the right breast, and the hand and arm were much lacerated. She complained of much pain at each inspiration, and had a troublesome cough, to which she said she had long been subject. Her pulse was 126 and feeble. A girdle bandage was buckled round her chest to fix the ribs, and the lacerated wounds dressed with adhesive plaster. *Fever diet. Pil. dydrarg. submur.* gr. v. h. s. s. *Haust. cath. mane.*

6th. Had slept but little—cough troublesome—expectoration difficult—respiration easier. Pulse 100 and stronger—bowels open. *Mist. feb.* c̄ *Oxym. scill.*

7th. P. 120 and feeble—has had but little sleep—expectoration still difficult—respiration uneasy—complained of the stiffness of the bandage, for which a flannel roller was substituted.

8th. P. 130. Tongue moist—cough troublesome. *Rep. mist. c. add. Tinct. digitalis*, ♏. x. 4*tis horis.*

She continued for the next three days much in the same state; the cough continuing troublesome, and the expectoration scanty. The pulse was reduced to 112, and had more strength. *Omit. Tinct. digit.* On the evening of the 11th her pulse was 120 and very irregular—tongue foul—respiration not very difficult—sloughing of the cellular membrane of the hand. *Catapl. commun.*

12th. Considerable inflammation extending up the arm—had passed a restless night—cough frequent—respiration difficult—pain of side at each inspiration—pulse 92 and irregular—tongue foul—congestion apparent from the blueness of the countenance—urine dark and turbid—has had the bowels relieved twice. *Mist. feb.* ℥iss. *Pulv. ipec. c* gr. iij. 6*tis. horis.* In the evening the pulse was raging between 128 and 136 and feeble. The sloughing of the hand extending.

13th. Had passed a good night, and was much better—urine copious—pulse 124 and stronger—tongue furred—cough less—respiration easier. No action of the bowels. *Haust. cath. stat.* In the evening pulse 134, tongue brownish, breathing improved, head and arm easy.

14th. Pulse 124—tongue furred—hand very painful, and discharging an ill-conditioned pus—a small slough over the external condyle of the humerus—bowels not relieved. *Rep. haust. cath.* which operated freely during the day.

15th. P. 124 and irregular—tongue still brown and dry, but skin moist—hand and arm easier—respiration difficult, and complains of a sense of tightness in the chest. *Pulv. ipec. c. to be discontinued.*

16th. Pulse 124—tongue white—bowels open—expectoration difficult, and respiration uneasy. *Emulsio pect.* c̄ *Tinct. opii c.*

From this time the urgency of the symptoms abated; the skin became moist; the cough less troublesome, although the expectoration was difficult the pulse reduced in frequency and gained strength. Healthy granulations of the hand and arm ensued, and on the 22d she was able to be got out of bed. She gradually improved, and was discharged the hospital on March 31st.

### FRACTURED RIBS.

Hannah Clarke, æt. 85, was admitted April 26th, under the care of Mr. Pettigrew, having been knocked down by a cabriolet, the wheel of which passed over her back and fractured several of the ribs on the left side. Her breathing was difficult, and attended with much pain. Pulse frequent but feeble.

*Hyd. submur.* gr. v. *stat. Haust. cath. hor.* 1 *post.* Roller round the chest. In the evening she complained of great pain of the side—pulse 120 and hard—tongue white—respiration difficult. *V.S. ad.* ℥viij. The blood uninflamed. Her pulse sunk to 116, and became much weaker.

27th. Had passed a good night—pulse 108 and soft—respiration natural—no cough—urine copious and natural—bowels not acted upon. *Rep. purgat. Pulv. ipecac c.* gr. x. *h. s. s.*

28th. Bad night—side painful—slight cough—respiration easy—pulse 112, soft and weak—tongue white and dry—bowels still confined. *Haust. cath.* 4*tis horis. Enema commune stat. Pulv. ipec. c.* gr. x. *h. s. s.*

29th. The injection had freely relieved the bowels—pulse 104, soft and regular—side painful—had passed a bad night. *Mist. sal.* ℥iss. 4*tis horis.*

30th. Cough troublesome—pulse 108 and weak—expectoration frothy—tongue white—bowels relieved twice. *Cont. Remed.*

May 1st. Had passed a better night—pulse 100 and soft—cough slight—expectoration scanty. ℞ *Pulv. rhœi,* gr. vj. *Pulv. ipec. c.* gr. x. *M. ft. pulv. h. s. s. Cont. Mist.*

2d. Expectoration slightly tinged with blood—had a tolerable night—p. 108, soft and weak. Bowels much relaxed, and the discharges very offensive. *Cont. remed.*

She continued to improve; the cough varying more or less, and the expectoration diminishing. Union of the fractured ribs proceeded much more rapidly than might have been expected from the advanced age of the patient, and she was well enough to be made an out-patient on the 26th.

### FRACTURED FEMUR—NO UNION—DEATH.

Mary Canty, æt. about 70, admitted June 27th under the care of Mr. Pettigrew. She was much afflicted with rheumatism. Fell down whilst sweeping her room, and fractured the right thigh. The fracture was oblique and about three inches from the condyles. The limb was readily made to correspond in length with the other, the muscles offering no resistance whatever to the extension made. The limb was put up and laid upon the fracture-board, and was quite easy. At night the muscles were found to have contracted violently, and the fractured ends of the bone were displaced. *Pulv. opii c.* gr. x. *h. s. s. Haust. canth. cras mane.* She passed the night badly; had severe pain in both limbs, but more in the sound than in the injured one: the latter was much swollen, and the ends of the bone displaced. The inclined plane was removed, and the limb extended with a pillow beneath the ham. The position gave great ease. *Cold lotion to the thigh. Mist. feb.* ℥iss. 4*tis horis.*

29th. Bowels relieved—skin soft—pulse 104—tongue furred. *Pil. sapon.* c̄ *Opio*, gr. v. *h. s. s.* She passed a good night, but the muscles contracted violently, and the bones were again displaced. Opiates were combined with the fever mixture, and all kinds of contrivances were resorted to, to keep the limb steady, but without effect. Dessault's splints was used, but the spasmodic contractions were so violent that the ends of the bones were continually displaced. The limb was again put upon the double-inclined plane, and splints made firm by rollers, tapes, &c. The contraction, however, in this position occasioned so much pain that the plane was obliged to be taken away, and the limb supported only by pillows. In this way she went on for a fortnight, when ulceration of the integuments of the back took place, and sloughing commenced. She was placed upon the hydrostatic bed, and the usual dressings resorted to. Her sufferings, however, were great, and nothing like union or any attempt at union appeared to have taken place. Her appetite failed, and her powers began to sink: aphthous appearances ensued, and she sunk on the 16th October, having been nearly four months in the hospital. Examination of the femur shewed the fracture to have been oblique, and the bones were overlapping each other to the extent of three inches and a half. The fractured surfaces were moveable upon each other, and the edges as sharp as at the moment of the accident. No bony matter had been thrown out; some condensed cellular membrane was beginning to form a kind of ligamentous connection along the sides of the fractured bone.

### COMPOUND FRACTURE OF THE TIBIA AND FIBULA—DEATH.

John Atwell, æt. 63, was admitted into the hospital July 1st, under the care of Mr. Pettigrew, with a compound fracture of the right leg. When brought into the hospital, the lower portion of the tibia protruded through the integuments, about three inches from the ankle-joint. There was considerable hæmorrhage, the vena saphena major being wounded. The bone was replaced, and the wound dressed; the bleeding arrested, and the leg put loosely up in Sharpe's splints. The patient was of a full habit of body, of a very irritable temper, had led an irregular life, and was labouring uuder a fistula in ano, for which he had been operated upon, but the wound had not healed, in consequence of his urine making its escape through the wound, there being a communication between that part and the urethra. *Haust. cath. stat.—Cold lotion to the leg—Fever diet.*

2d. Feverish, and has had rigors several times during the night, but very little pain of the leg. *Mist. feb.* ℥jss. *4tis horis.*

On the 8th, the dressings were removed, and the wound, which was about the size of half-a-crown, looked healthy. It was then dressed daily, the discharge became copious, and the pus was occasionally unhealthy, and mixed with blood; sinuses were beginning to form in different directions. He was put upon a more generous diet, and the pus, by being carefully pressed out at each dressing, soon became healthier, and less in quantity. Healthy granulations formed in the wound, which contracted daily. On the 18th of August, it had quite healed. During this period, his health was tolerable—attention was paid to his bowels, as he occasionally needed an anodyne. A slight œdema appeared about the ankle and foot, but was unattended with pain.

On the 29th of August the leg was examined, and it was clearly ascertained that the bones had united. The splints were taken off. He was, however, very weak, and ordered *Dec. cinchon.* ℥ij. c̄ *Acid sulph. dilut.* ♏x. *ter die.*

Sept. 1st. The leg became very painful; it was œdematous, and there was an erysipelatous blush on the skin. He had passed a bad night—the face was flushed—skin hot and dry—pulse quick—tongue furred—bowels natural. Fomentations were applied, and the antiphlogistic regimen adopted.

3d. He was better, and the inflammation was less, but the œdema extended to the thigh, and affected equally the other limb—urine scanty. By the use of diuretics, the urine was increased and the œdema was reduced, and he was so much better on the 6th as to be able to sit up. He could bear the weight of his body upon the fractured leg. He continued to improve, although both limbs remained much swollen, until the 13th, when he again became feverish—pulse 120, and very feeble—tongue white—bowels relaxed—urine scanty.

From this time he gradually got worse. He had occasional rigors, diarrhœa—deficient urine—his face flushed—both lower extremities and abdomen œdematous—sleepless nights, no appetite—great thirst, and was unable to retain food upon his stomach. He became weaker and weaker, and, on the 23d October, expired. It had been proposed to him to remove from the hospital, to improve his general health, but he was unwilling to quit it. Examination of the body was not permitted, but the leg was inspected. The bones were found to be only partially united—it is probable new bone had been absorbed during the continuance of the diarrhœa and other symptoms, marking the failure of his powers and general disturbance of the system.

### STEATOMATOUS TUMOR—REMOVAL.

Ann Ford, æt. 38, was admitted into

the hospital July 15th, under the care of Mr. Pettigrew, for a tumor, situated on the upper part of the back, inclining to the right side, and measuring 23 inches in circumference. She stated that it had been attaining its present size during six years; that it first appeared as a small lump on the back of the neck, and grew very gradually until the last year. She enjoyed good health, and Mr. Pettigrew determined upon its removal. Two incisions, in the form of an ellipsis, were made, and the tumor dissected out. The veins were large and numerous, and a large quantity of blood was lost; but not a single artery required the ligature. Mr. P. attributed this, in great part, to a free use of cold water during the operation. The adhesions of the tumor to the surrounding parts were very strong, and great care was requisite to avoid wounding the fascia covering the trapezius muscle. The tumor was steatomatous. The healing of the wound was very favourable, and the woman was well enough to quit the hospital on the 2d of August.

---

## St. Thomas's Hospital

### Neuralgia.

Mary Anne Huntingford, a servant, æt. 28, was admitted into St. Thomas's Hospital, under the care of Dr. Roots, April 3d, 1834. She then stated, that she had been subject to paroxysms of pain in the loins, thighs, and legs, for more than two years, which had gradually increased. She had been in the hospital, under Dr. Elliotson, in January last, by whom she was at first freely depleted, after which the disease assumed an intermittent form, and she then took large doses of quinine, and was slightly relieved by it, but left the hospital before she was well, and soon became worse.

At the time of her second admission, her general health was not impaired. She was subject to paroxysms of pain, generally two every day, in the loins, hips, thighs, and legs, following the course of the sciatic nerve. The pain was of a severe cutting kind, and attended by some twitching of the muscles. There was tenderness on pressure of the lumbar vertebræ, and along the whole course of the sciatic nerve. The paroxysms of pain came on and ceased suddenly, and without any warning; they did not observe any regular intervals, and were of variable duration, often continuing for several hours; and in the intervals she was seldom free from uneasiness. Has no symptoms of hysteria; menstruation regular.

Quinæ sulph. gr. v.
Ferri sub-carb. ʒij.—6tâ quaq. horâ.
Empl. canth. sacro.

April 9th. No change.

Ferri carb. ʒiij. Extr. stramonii, gr. ss. 6tis horis.

On the 12th the paroxysms were of rather shorter duration, but returned as frequently, and were quite as severe as ever. The quinine was increased to gr. vij. and the iron to ʒiv. in each dose. On the 14th she had no pain, and only a little on the evening of the 16th. Quinine increased to gr. x. in each dose. The intermittent character of the pain continued to the 30th, and the paroxysms had gradually become less severe and of shorter duration. The stramonium was omitted on this day, as the sight had become affected by it.

May 3d. The improvement had continued, and the quinine was increased to gr. xv. From the 9th to the 24th she suffered from headach and sickness, but the medicine was continued, and the pain abated. On the 24th the iron was increased to ʒvj. and on the 28th gr. 1-6th of muriate of morphia was ordered with every dose.

June 11th. The pain still better, and intermitting, but, in consequence of continued headach and sickness, all the medicines were omitted.

Ung. veratri (℈j. ad. ʒj.) ʒj. ter die lumbis.

On the 14th the pain had become more severe, and the quinine, carbonate of iron, and muriate of morphia, were gradually resumed, and increased up to August 23d, at which time she was taking—

Quinæ sulph. ℈j.
Ferri subcarb. ℥j.
Morphiæ muriat. gr. ⅓, 6tis horis.

These medicines were omitted for four days, during which she took some creosote; but the pains returned immediately after the medicine was changed, and continued to increase. The old medicines were removed, and she quickly improved, as before. She left the hospital on the 22d Sept. of her own accord; the pain had diminished much in severity, returned much less frequently, and not at any regular intervals.

The pain soon increased, but never attained its original severity. She was again admitted into the hospital under Dr. Roots, Nov. 21st. The pain was of the same character, and in the same situation, as before; commencing in the loin, and afterwards affecting the gluteal muscles, and extending down the back part of the thighs to the hams and heels. The paroxysms usually came on about 7, p.m. and continued four or five hours During the attack the muscles were firm and contracted. There was some tenderness of the gluteal muscles at all times. General health good; pulse 75, feeble.

On the 25th, the following ointment was ordered:—

Aconitæ, gr. ij.
Ung. cetacei, ʒj., ft. ung. et infricet pars sexta part. dolent nocte maneq.

On the 28th, she stated that after each application of the ointment, the parts rubbed became hot and smarted, but this was quickly followed by numbness. After the third application the pain was a little relieved, and after the fifth, the amendment was very remarkable. The paroxysms were much diminished in severity, and did not continue more than one or two hours. The pain, which had formerly been very acute, she described as being much less severe, and called it a "burning twitching." The parts were less tender on pressure, and she could sit up without causing pain in the gluteal muscles, which she could not do three days since.

Infricet. unguent. ter die.

Dec. 2d. Two days since, in the morning, she had a more violent paroxysm of pain than she had had since her admission. After it had continued an hour and a half, the ointment was applied, and in ten minutes she was much relieved. The paroxysms do not now last more than twenty minutes, and she says they have never been so slight before.

6th. The pain has now resumed its intermittent character. On the 3d, 5th, and 7th, she had a short and slight paroxysm in the evening each being less severe than that preceding it.

Quinæ sulph. gr. v., 6tis horis.

9th. The pain returns every other night, but is gradually decreasing in duration and severity.

There is a man in Luke's Ward, under Dr. Roots, who has a painful affection of the sciatic nerve, for which he used veratrine ointment for some time without any benefit. He has used the aconitine for a week, and a very decided mitigation of the pain followed its application.

Dr. Roots informs me that he has used the same remedy in private practice in three cases with similar success.*

In the foregoing case there was exhibited *bold practice*, in respect to doses. We know Dr. Roots well, and believe him to be a very judicious physician. We should have great confidence in his prescriptions, because we are satisfied that he acts under the guidance of observation and reflection. Eighty grains of sulphate of quinine, added to a quarter of a pound of carbonate of iron, with a strong dose of morphine, in the 24 hours, make, altogether, a "*quantum suff.*" that would astonish a Bonhommie, a Quinn, a Hahnemann—or, indeed, any man who had not studied in St. Thomas's Hospital. We remember, full well, the sensations which we ourselves experienced, some years ago, when taking twenty grains daily of sulphate of quinine for an intermittent. The tensive feelings about the head—the "tightness" (as Dr. Philip would say) of the pulse—the constriction in the line of the intestinal canal—the *cordiness* (if we might use such an expression) of every nerve—and the painfully vivid operations of the mind—left an impression on the memory which can never be effaced. There can be no doubt that difference of temperament, in individuals, makes immense difference in the effects of medicines; but we have so often remarked effects corresponding with those enumerated, in various individuals, that we confess some degree of timidity in the *heroic* exhibition of medicines. With respect to the carbonate of iron, we suspect that a drachm dose would be just as efficient as a quarter of a pound—perhaps more so. We acknowledge, however, that it is by experience, and not by theoretical calculations, that we are to be guided in these matters; and, therefore, we have put the foregoing case on record, from the practice of a talented physician, in order that it may excite the attention of our readers.

---

* Renshaw's Med. and Surg. Journal.

---

## MANCHESTER ROYAL INFIRMARY.

The following cases of chorea and of jaundice are taken from the volume of Clinical Reports, lately published by Dr. Carbutt, of Manchester. The press of other matter prevented their insertion in the last Number of this Journal. We alluded to the volume, or rather to its preface, and took the liberty of questioning the propriety of trusting greatly to "principles," in the practical department of medicine. Our attention will now be directed to the "cases," the pabulum alike of doctor and of critic.

A work like this is insusceptible of analysis, and not adapted for a critique. The most natural and most advantageous mode of rendering it useful to our readers will be to bring before them, at convenient opportunities, the leading facts which it contains. Its articles will dovetail, without difficulty, into our clinical department.

### I. CHOREA.

*Case* 1. Grace Plant, æt. 24, married, admitted June 22d, 1833.

She first perceived involuntary motions in her limbs about a month ago. She had the sense of a ball, rising up in her throat, which she attributed to wind. Bowels obstinately costive. Pain in the head. Appetite bad. Tongue clean and moist. Has not perceived her catamenia except twice, and then scanty, since her marriage, a period of six years. Has had three children, the youngest is sixteen months old. Since she weaned her child, a fortnight ago, she has felt considerably better. She has lately laboured under much mental anxiety. She says the first symptoms of her affection were brought on by too much thinking, or, as she terms it, too much study. Pulse slow, and rather feeble. Her nose, for the last few days, has slightly bled. Has no pain anywhere except the headache. Has slight lepra on her legs.

To take five grains of the Pilula Aloës cum Myrrhâ, every hour whilst waking.

23rd. Bowels copiously moved. Tongue clean. Appetite good. Cannot sleep. Complains that the rising of wind is very troublesome. No diminution in the involuntary motion of her limbs.

In addition to the pills, to take the warm bath every night.

25th. Perspires much after the warm bath, which she thinks does her good. Leprous affection of her legs much improved. Convulsions less violent. Bowels much purged.

The twitchings now diminished, but on the 28th, she had been much troubled with globus hystericus, and had such pain in the head, that eight leeches were applied to the temples. After this she progressively improved, and on the 15th July, was discharged cured.

*Case* 2. James Lowe, æt. 12, admitted July 1, 1833.

Works in a cotton factory. Has been ill six months. The convulsions are very strong; he is entirely speechless from the difficulty of articulating; he has much stupor. Bowels are costive. Tongue is foul. He has pain in the head.

> To take a pill of five grains of the Pilula Aloës cum Myrrhâ every hour whilst waking.

2d. Bowels unmoved.

3d. Has had very copious motions; the stools consist of an immense quantity of feculent matter of all colours. He is rather improved.

The convulsions diminished further, and the motions grew more natural. On the 17th, he was ordered to take the shower-bath every morning, and to persevere with the pills. Some amendment ensued, but, on the 24th, he complained of head-ach.

> To omit the bath and the pills—to take Pilula Zinci Sulphatis, gr. j. ter die.

On the 1st of August, the twitchings were not gone.

℞. Liquoris Morphinæ Acetatis, ♏vj
Misturæ Acidi Sulphurici f ℥iij.
Misce.
To take an ounce after each pill.

After this, he progressively improved; and, on the 19th of August, was discharged cured.

The following judicious remarks of Dr. Carbutt are deserving of insertion.

"In the case before us,* gentlemen, I have principally to remark, that, whereas it is laid down by Sydenham,† that St. Vitus's Dance attacks children of from ten to fourteen years of age, the present patient is twenty-four years of age, and, what is more remarkable, she is a married woman and has had three children. The complication of hysteria with chorea is not to be wondered at, as these two diseases have a considerable resemblance to each other in many particulars. The woman was also affected with lepra vulgaris, but it seems quite uncertain whether or not it was the partial suppression of this leprous affection which gave rise to the two nervous affections.

With regard to the predisposing causes of chorea, they are said to be the feminine gender, the nervous temperament, hereditary liability, infancy, or at any rate, an age before that of puberty. Here, however, we have the curious fact of a married woman with children, she herself being twenty-four years of age, having the disease. The exciting causes of chorea *are said* to be great fright, a fit of anger, violent and repeated crosses, the presence of worms in the alimentary canal, difficulty or suppression of the menses, and suppressed cutaneous eruption.

With regard to the seat and nature of chorea, that is to say, its proximate cause, much has been said and written, with which I do not intend to trouble you; but I will lay before you my own ideas on the subject. The commencement of chorea I believe to be an irritation produced in the intestines either by the presence of accumulated feces, or by the presence of worms. This irritation is conveyed to the brain, and produces uneasiness there. The brain makes an instinctive effort to get rid of this uneasiness; but, having no power over the involuntary muscles of the intestines, it excites disorderly motions in the only muscles over which it has power, the voluntary. These disorderly motions, being once excited, soon become confirmed by habit, which as you well know, has great power over the voluntary muscles. The disorderly motions of which I speak have been well designated by a French author, *la folie musculaire*, that is to say muscular madness. Now, the consequence of the confirmation of the habit of disorderly motions in the voluntary muscles, is that the motions do not immediately cease upon the removal of the cause which originally excited them, but sometimes continue for months, sometimes for years.

---

* The first case which we have noticed.—Eds.

† 'Schedula monitoria.' Sect. 19.

The remedies which have been recommended for chorea, may be reduced to four classes,bloodletting, purgatives, antispasmodics, and tonics. Bloodletting, purgatives, and opiates, that is to say antispasmodics, were employed by the celebrated Sydenham,* in a kind of alternate manner, which it is quite unnecessary for me to describe particularly. Purgatives were employed with great success by Dr. Hamilton,† and I may add that I enjoyed the advantage of daily witnessing his practice in this and other diseases, in the Royal Infirmary of Edinburgh. Dr. Currie, whose practice I had the pleasure of witnessing at Guy's Hospital was very partial to tonics, especially the sulphate of zinc, with which he certainly had great success. No one, I think, has employed antispasmodics alone.

Having tried all these plans, I should recommend you, if the patient be young and vigorous, and especially if he or she have any fixed pain, to draw blood either from the arm, or by means of leeches applied to the part affected. I did so, that is, I applied leeches to the head in the case before you, which immediately removed the pain. I should then, with a view to remove the great accumulation from the intestines, administer one of the pilulæ aloës cum myrrhâ, every hour during waking. It is necessary to give them every hour in order to keep up completely the peristaltic action of the bowels; and you will be completely astonished, if you inspect the feces every day, which you certainly ought to do, to witness the appearance of them. In the first place the quantity of them will surprise you; in the second place, the great varieties of colours will a little amaze you. You will see part of them black, part brown, deep yellow, green, clay-coloured.—When you have continued the purging until the feces are of a uniform and natural colour, and you will be surprised to find how well the patients bear this purging, you may then omit the purgative pills, and give a tonic pill of one or two grains of sulphate of zinc, three or four times a day; with a sulphuric acid mixture, containing a proper and regular dose of the acetate of morphine. You may also, at any period of the treatment, employ the shower-bath. The reason why I employed the hot bath in Grace Plant's case, was the fear that her disorder had, in some measure, arisen from the partial suppression of the lepra; and also because the hot bath would at any rate be beneficial to her lepra. If you think that suppression of the catamenia has any thing at all to do with the complaint, you may give the pilula ferri composita; although the constant purging with the pilula aloës cum myrrhâ will most probably produce a very beneficial effect upon the uterine system, in cases of the partial or total suppression of the catamenia.

If you proceed upon the principles just laid down to you, I cannot doubt that you will have the same success in every case of chorea coming under your care, as I myself have had."

## II. JAUNDICE.

Dr. Carbutt details two cases, and subjoins a few remarks, which, being essentially founded on the former, cannot be justly appreciated without them. We present the cases, in some degree abbreviated.

CASE 1.—*Jaundice, from Inflammation of the Duodenum.*

Mary Ann Hollingsworth, æt. 41, unmarried, admitted August 12, 1833.

The skin and conjunctiva are tinged of a deep yellow—pains in the limbs—pain in the right side of the epigastrium, over the duodenum, but none in the region of the liver—much depression of spirits—tongue furred—appetite impaired—bowels purged, and fæces loose and clay-coloured—urine very dark—no catamenia for the last twelve months—pulse 48—sleeps badly and is troubled with terrifying dreams

---

* 'Schedula monitoria.' Sect. 20.

† Hamilton, on Purgative Medicines.

The complaint appeared a fortnight ago with pains in all her limbs, sickness and purging, and yellowness of the skin.

To have twelve leeches applied to the right side of the epigastrium, over the duodenum.

To take one mercurial pill night and morning.

15th. Decidedly less pain in the epigastrium since the application of the leeches. Has still pain in the thighs and legs. Tongue cleaner. Appetite better. Bowels open. Feces bilious. Urine very dark coloured.

To have ten leeches applied to the right side of the epigastrium.

On the 14th, the pain in the side had disappeared. On the 16th, the tongue was clean, and the excretions had become healthy. The pills were discontinued, and the following mixture prescribed.

℞. Potas. carb. ʒij. Tinct. aromat. ʒiv. Infus. calumb. ℥vss. M. Capt. ℥iss. 4 ter die.

From this time she continued to improve, and, on the 2d of September, was discharged cured.

"I knew, gentlemen," says Dr. Carbutt, "that this case of jaundice depended on inflammation of the duodenum, partly from the pain upon pressure over the duodenum, and partly from the circumstance that the disease was ushered in with sickness and purging, pain in all the limbs, and the sleep disturbed by terrifying dreams. I apprehend the mode in which inflammation of the duodenum produces jaundice, is by the inflammation extending up the ductus communis choledochus, and thickening the mucous membrane so as to choke up the passage. You have seen how rapidly the disease was removed by the application of leeches to the epigastrium.

This species of jaundice is not, as far as I am aware, mentioned by any author. It may, perhaps not inappropriately be named *icterus duodenalis*."

The cautious pathologist might not experience the certainty of Dr. Carbutt on the jaundice, in this instance, arising from inflammation of the duodenum. He might hint that the circumstance of pain being felt in the direction of the duodenum, and the symptoms of sickness, diarrhœa, pains in the limbs, and sleep disturbed by terrifying dreams, are insufficient to prove the existence of a new species of jaundice. Those symptoms may be admitted to establish its probability, but rigorous reasoning would admit no more. The practical physician may possibly content himself with the issue of the treatment. It was such as the symptoms seemed to indicate, and whatever was their cause, it effected their removal.

### Case 2. *Hepatic Jaundice.*

Anne Charlesworth, æt. 56, married, was admitted June 11th, 1833.

The skin and conjunctiva are deeply tinged with yellow. The hepatic region is not painful on pressure; but she says she is frequently seized with acute pain in the right side, which extends upwards to the right shoulder: when thus affected she can lie with more ease on the right side. Has some pain in the loins and down the right thigh. Much lassitude and debility. Sleeps well, but has startling dreams. Pulse 80, soft, and regular—tongue white and furred—appetite bad—bowels very loose, and the motions slimy and whitish—urine muddy, with a bilious tinge.

The complaint commenced in December last, with pains in the whole body, and a constant purging of mucus and of blood. She had also intolerable itching, especially when warm in bed. Yellowness of the skin succeeded these symptoms.

Pil. hyd. gr. v. omni nocte.

On the 14th the blue-pill was ordered to be taken twice, instead of once daily. On the 17th, there was little alteration. She suffered from great depression of spirits, and had several times been attacked with feelings of extreme faintness. She had a sense of burning at the epigastrium. Her low spirits prevented her from sleeping.

She was ordered a morphia draught, and a warm bath every night.

On the 20th she was so depressed that she grew impatient of remaining in the dispensary, from which she accordingly departed.

The following are the clinical remarks of Dr. Carbutt.

"You know, gentlemen, there are usually reckoned four species of jaundice, to which adults are subject. 1. Biliary jaundice, in which the ducts are obstructed by a clot of thickened viscid bile. I apprehend the case before us was not a case of this kind, because it is most probable that before the lapse of six months the obstructing clot of bile would have made its exit into the duodenum. 2. Gall-stone jaundice, in which the passage of the bile is impeded by the presence of gall-stones in the biliary ducts, causing great pain in the epigastric region; which pain, in the case before us, did not exist; shewing that this was not the species of jaundice with which our patient was affected. 3. Spasmodic jaundice, in which the flow of bile is obstructed by a spasmodic constriction in the course of the bile-ducts: which, however, soon gives way, leaving the bile-ducts free. Now, as our patient had been ill six months, it is not probable that her complaint had its origin in so temporary a cause. We come, therefore, to the 4th and last species, Hepatic jaundice, in which the course of the bile is obstructed by a derangement of the liver from scirrhous or other indurations. This, I believe, is the disease of our patient, and is decidedly the worst form in which jaundice ever appears. It is frequently the mark of a broken state of health; it rarely appears, as the other species often do, among the young and vigorous; but mostly among those who have lived in a hot climate, or who have led a life of hard drinking.

As for the treatment, I intended to try the effect of small doses of mercury, continued for a considerable length of time, and when the mouth should become affected, to exchange the mercury for small doses of the pilula aloës cum myrrhâ, which, in a manner that I shall explain another time, produces upon the liver the same effect as mercury. I should also most probably have employed the nitro-muriatic bath, which is said to have a remarkably specific effect upon the liver and its secretion; and if I should obtain a patient fit for its employment, I trust I may yet have an opportunity of exhibiting it to you. The warm-bath and the acetate of morphine I employed for the purpose of giving her good nights, and allaying her excessive general restlessness. This last, however—her restlessness I mean,—increased so very much, and made her so importunate in her entreaties to be allowed to go home, that, taking into consideration the very great hopelessness of her recovery, I at last consented to allow her to leave the house.

In commencing the enumeration of the species of jaundice, I made use of the expression, '*usually reckoned*;' because there is another species not usually mentioned by authors, to which I have given the name of icterus duodenalis, and which has its origin in an inflammation of the duodenum. This inflammation induces a greater secretion of bile, and when the inflammation extends up the bile-ducts, it thickens the mucous membrane so as to present an impediment to the passage of the bile into the intestines, and thus it produces jaundice. This species has not, as far as I am aware, ever been mentioned by authors."

Dr. Carbutt is probably right in his opinion of the irremediable nature of the jaundice in the instance of the patient whose case we detailed last. Her advanced age, the general symptoms, and the duration of the malady, render an unfavourable prognosis unavoidable. Yet still we may observe that the treatment in the infirmary was too brief and too simple to warrant the conviction of the inefficacy of remedies. Leeches and subsequent counter-irritation in the region of the liver, aperients with alkalies, and afterwards mild tonics—and the gentle exhibition of mercurials are means we should employ, before we abandon the case as hopeless. It is possible that these or analogous measures had been adopted and fully tried, prior to the patient's reception in the infirmary. But they have not been alluded to in the clinical report.

## III. Rheumatism.

This disease has been ranked amongst the opprobria of our art. Yet we think that the accusation is not strictly just, for science can do much to mitigate and cure acute rheumatism, and more to avert those dangerous complications and effects—inflammation of the pericardium, the pleura, and the cerebrum.

Dr. Carbutt considers, under the name of rheumatism, five different affections, and appears inclined to include as a sixth, the tic douloureux. He goes beyond the popular nosology, which allows but three, and which gives to them the classic names of "rheumatism," "rheumatics," and the "rheumatiz." The superficial examination of the vulgar has failed to discriminate those nicer shades distinguished by the eye of the clinical physician.

"The first variety," says Dr. Carbutt, appears to consist in a peculiar, specific, inflammation of the muscular fibres, or of the cellular membrane, or of the muscular aponeuroses, of one or more parts of the body. It is accompanied with much fever, excessive pain upon motion, a tongue covered with a thick, white or buffy coat; a moist, clammy skin; urine high-coloured and depositing a rose-coloured sediment; a full, round, and bounding pulse: the blood drawn is coriaceous, and, for the most part, what is called cupped.

This kind of rheumatism, which is commonly known by the name of rheumatic fever, should be treated by means of copious and repeated bleedings.—Large doses of calomel should be given, first as a purgative, next in order to affect the system. Purgatives, salts and senna, for instance, should then be administered. Diaphoretics and sedatives the best of which is the pulvis ipecacuanhæ compositus, or Dover's powder, should follow the purgatives. Lastly, large doses of the cinchona, or Peruvian bark, or otherwise of its preparation, the sulphate of quinine, may be exhibited. Low diet must be observed throughout.

The second way in which what is usually styled rheumatism appears, is in the form of arteritis or phlebitis, inflammation of the arteries or veins. I must candidly admit that I know of no precise diagnostic symptoms whereby to distinguish this affection from the rheumatic fever just described. Perhaps, however, the pain is greater and more circumscribed, whilst, at the same time, the febrile symptoms are less intense. This kind of rheumatism should be treated with bleedings from the arm, local bleeding by means of leeches, calomel, salts and senna, Dover's powder in large doses, with low diet.

The third form in which this disease appears, is an acute, hot, and highly painful affection of the joints, as the elbows, the wrists, the knees, the ancles, accompanied with a moderate degree of fever. This is generally called acute rheumatism, it must be treated by general bleedings, local bleedings with leeches frequently repeated, calomel purgatives, Dover's powder, the hot-bath, cinchona, bark, or sulphate of quinine, low diet at first, generous diet afterwards. The colchicum autumnale or meadow saffron is very much recommended in this affection, but I have no great faith in its effects."

We hesitate to accede to the division drawn by Dr. Carbutt between rheumatic fever and acute rheumatism.—Such divisions are clear and satisfactory on paper, perhaps they may adorn a clinical lecture, but they lose their substantial reality and distinctness in the sick room and the ward. It is true that we find rheumatic inflammation affect in some instances the cellular and fibrous tissues, and perhaps the muscles, in preference to the synovial membranes—whilst in others the latter textures are principally implicated. This fact gives an air of plausibility and correctness to the distinctions which an able physician has drawn between synovial and fibrous rheumatism. It has even been believed with some semblance of truth, that the latter is the form which evinces an exclusive disposition to metastasis. The experienced physician is, however, aware that these doctrines are no more than plausible, that Nature resists the arbitrary law, that fibrous and synovial rheumatism are frequently combined in the same individual, and that affections of important organs, especially the pleura and the pericardium, may occur in both.

Dr. Carbutt asserts that the synovial rheumatism is attended with less fever than the fibrous. As a general rule this may be true, but it is far from being universally the case. In some of the very worst cases of "rheumatic fever" which we have had occasion to observe the synovial membranes were the parts affected. We would not, therefore, state to pupils in the confident tone adopted by our author, that the two affections are separate and distinct, that one is a more acute variety than the other, and that a different treatment is required for both. Those pupils finding that the lessons of their teacher are not borne out by bed-side observation, and discovering that what was so simple in the lecture-room becomes contradictory and confused in practice, are frequently tempted in despair and disgust to dispute authority, undervalue learning, and trust to routine and empirical experience. Instead of laying down the positive divisions of Dr. Carbutt, we should rather proceed with more caution and more accuracy to state that rheumatism sometimes affects in preference one tissue, sometimes the other, and sometimes, though not so frequently, both—that usually the fibrous rheumatism is a more acute disorder than the synovial—that generally it evinces a more decided disposition to attack internal organs, especially the pleura and the pericardium—and that, commonly, certain remedies are more useful in the one form than in the other. When taught with such philosophical caution, we might almost call it doubt, the pupil will observe with corresponding care, and the apparent contradictions of nature will not astonish and may not perplex.

That division of rheumatism which is seated in the arteries and veins is hinted rather than described by Dr. Carbutt. We must own that we never saw an instance of the kind, and probably neither Dr. Carbutt nor ourselves would recognize it were it to occur. It is doubtful if, under such uncertainty, it is proper to admit the existence of the disease as one of a substantive character. The arteries or the veins may inflame in rheumatic cases, as the pleura, the pericardium, the mucous membrane of the bowels, perhaps every texture in the body may do. Yet the present condition of our knowledge would lead us to deem them consequences or complications rather than primary rheumatic symptoms.

It is curious that, although our author alludes to this obscure and dubious affection of the blood-vessels, he omits to notice the frequent and formidable affection of the pericardium. Yet, if any great improvement has been effected with respect to the management of rheumatism, it arises from the attention which has been directed to the heart. The experienced practitioner anxiously watches and promptly meets any symptoms of pericarditis and of pleurisy; he knows that they are common, insidious and formidable.

We lately saw an instance of fatal affection of the mucous membrane of the bowels. A girl, aged eighteen, had, twice or thrice previously, suffered from acute rheumatism, of the mixed fibrous and synovial character. In each attack, there had been symptoms of some implication of the pericardium. This Winter she was again affected in a similar way, and was apparently recovering, when, at mid-day, she was seized with bilious vomiting, purging, and pain in the region of the colon, rapidly succeeded by collapse. Soon after midnight she died. Some little time ago, we witnessed a case of the same description. Blood was voided in the stools, and for some time the patient was in the utmost danger; but he did not die.

Dr. Carbutt, it would seem, is an advocate for copious and repeated bleedings in rheumatic fever. We doubt the propriety of this practice. It does not cut short the malady, but it greatly debilitates the patient, and we are not sure that it does not tend to favour the occurrence of metastasis. At all events, patients go through the disease well without copious bleeding, and we seldom or never have recourse to it. Of course we are speaking of an ordinary case, and of the ordinary treatment.*

"The fourth form of rheumatism is called chronic rheumatism, and is exactly the same as the third, except that all its symptoms are chronic, and there is little or no fever. It must be treated by leeches repeatedly applied to the painful joints, hot baths, blisters, calomel, stimulating liniments, cinchona-bark, ammonia internally, generous diet, the effusion of cold water on the painful joints, or lastly, frequent bathing in the Buxton baths.

The last is an almost never-failing remedy; and, if I am asked how it operates, I answer, I do not know. Some substance, as yet undiscovered by chemistry, exists, as I conjecture, in Buxton-water, on which probably its efficacy depends. The beneficial effects of Cheltenham-water in enlargements of the liver and spleen were acknowledged many years before the very existence of iodine in nature was known. Now, it is understood that iodine exists in Cheltenham-water, in the proportion of one grain in ten gallons. 'It seems not improbable,' says Dr. Daubeny, Professor of Chemistry at Oxford, 'that very minute portions of certain principles may act upon the system with an energy commensurate, not to their own quantity, but to the change their presence occasions in the properties of the more inert ingredients that accompany them.—In this manner we may explain the powerfully tonic effects of certain springs containing a very minute impregnation of iron; the cures effected by waters, such as those of Loueche or Gastein, which appear to approach as nearly as possible to absolute purity; and the efficacy in glandular disorders attributed to certain others, in which a minute proportion of iodine or bromine has been detected. In a Memoir read before the Royal Society, on the saline and purgative springs of this country, in which I stated the proportions of iodine and bromine present in each, I expressed myself as being sceptical with regard to any medicinal agency that could be exerted by so small a quantity as one grain of iodine diffused through ten gallons of water, the largest quantity in which I had ever detected it. The considerations above stated now induce me to attach more importance to the circumstance of its presence, for it is just as possible, *à priori*, that this quantity of iodine should infuse new properties into the salts which accompany it, and cause them to act in a different manner upon the system, as that less than a millionth part of potassium should create so entire a change in the relations of a mass of mercury to electricity. Whether the waters of Cheltenham or Leamington affect the constitution differently from the solution of Glauber salt, of similar strength, must be decided by the experience of those on the spot; but, granting this to be the case, and there is not wanting testimony in favour of such an opinion, the discovery of these new principles in several of them may serve to explain their superiority.'—I leave it to you, gentlemen, to decide, each in his own mind, how far these considerations apply to the undoubted efficacy of the Buxton-baths in cases of chronic rheumatism."

By the way, there are two remedies to which Dr. Carbutt makes no allusion—guaiacum for acute rheumatism, and mezereon for the chronic. Yet the mistura guaiaci is a very useful and a safe remedy for acute synovial rheumatism, and we have really seen it answer in a remarkable degree. It produces extreme diaphoresis.

The fifth form to which Dr. Carbutt adverts is sciatica.

"This affection (he remarks) sometimes attacks other parts besides the hip, as the face, the foot, and the mamma. It appears to me, that it is essentially an inflammation of the membrane which invests the nerve of the part affected. This is shewn by the intense pain, the sudden paralysis, so that a person walking in the street shall fall down as if in a fit, from which circumstance, no doubt, it has received the name of paralytic rheumatism, or rheumatic paralysis. The coldness, numbness, and wasting of the muscles, with the almost total absence of fever, altogether lead to the opinion, that it is more an affection of the nerves than of any other parts. When it exists in the face, it very much resembles the *tic douloureux;* or, for any thing I know to the contrary, the tic douloureux may be the same disease; which I think extremely likely. It should be treated, I apprehend, by means of local bleedings by cupping-glasses or leeches, by blisters, by mercury, especially calomel, so as to affect the mouth, by sedatives, as opium, extract of hyosciamus, or Dover's powder. A very good combination is, one grain of calomel and five grains of extract of hyosciamus, four times a day. Usually, as soon as the mouth is affected with the mercury, or even sooner, the disease yields as if by a miracle."

---

* In the following number of the Journal, Dr. Johnson means to attempt a distinction between what is called acute and chronic rheumatism—or rather to dislocate them. The former he would designate arthritis—the latter rheumatism.

We have, on several occasions, rapidly cured old sciatica in this manner. We have ordered the patient to take five grains of calomel, a grain of opium, and half a grain of the extract *of* the acetum colchici, for four or five nights successively, adding, on the following mornings, a very active purgative of senna and colchicum, &c. We have twice or thrice had the patient cupped over the sciatic nerve, and then applied blisters in the same situation. These means combined together, and conjoined with the warm bath, have, in several instances, speedily routed the disease, which had resisted, perhaps, the same measures employed in a more desultory manner.

"There are two affections which it is my duty to caution you against mistaking for rheumatism. The first is that inflammation of the periosteum which we find in secondary syphilis, and which gives rise to those syphilitic pains which, as you must all know, are so frequently mistaken for rheumatism. The second affection is that pain of the shoulders and arms, of the back and loins, of the hips, thighs, knees, legs, feet, and toes, which I have mentioned in former lectures, as being symptomatic of gastro-enteritis, and as being very often mistaken by even elderly practitioners, and as regularly treated by them, for rheumatism, to the great injury of the patients, and the aggravation of their real complaints."

Dr. Carbutt relates nine cases, six of which were chronic. The exposition of his doctrine renders a notice of these cases unnecessary, especially as they display no peculiar features of importance.

### IV. Amenorrhœa.

Three cases of this disorder are related. In one the cause was pregnancy, which the lady at first concealed, a common occurrence in hospital practice. In the other two instances the amenorrhœa was of a more orthodox description. We notice them in consequence of digitalis having been employed.

*Case* 1. Betsy Linney, æt 20, a factory girl, of strumous habit, and of pale complexion, had never menstruated.— She was much troubled with wind and globus hystericus. Pain in the epigastrium increased after eating, but not increased by pressure. Pain in the back, shoulders, and calves of the legs. Has some ulceration on her back.— Pulse rapid and small. Tongue streaked with white and slighly red at the tip. Bowels very irregular, sometimes costive, at other times very much relaxed.

Leeches to the epigastrium, a sulphuric acid mixture, rice diet, and castor oil, were the measures directed against the symptoms of gastro-enteritis. Those symptoms were relieved, and the girl was then ordered to take fifteen drops of the tincture of digitalis four times daily in the acid mixture. In six days after commencing this medicine, she felt very sick and faint, and the pulse was slow and regular. The digitalis was omitted, and on the next day she went out at her own request.

Dr. Carbutt observes, that as no very serious complications existed in the preceding case, as no important organ exhibited important alterations, he thought that a fair opportunity was presented for testing the effects of digitalis on the catamenia.

"Digitalis is said to have a peculiar determination to the genital organs, both in the male and in the female; so much so in the latter, as to be capable of producing abortion. However our patient took it for seven days only, when it produced so much sickness and fainting, and such a lowering of the pulse as to oblige me to omit it. It had produced no effect on the genital organs that I know of. Had the patient continued in the house, I should most likely have resumed it in a few days. When this patient came into the house she evidently laboured under inflammation of the stomach and intestines, which, however, was quite unconnected with her amenorrhœa. For this I treated her by leeches, poultices, and a mucilaginous diet. She was also of a very strumous habit, which was my reason for giving her the sulphuric acid mixture. Had she remained in the house, and the digitalis had entirely failed in bringing on the catamenial discharge, I should have administered the 'pilula aloës cum myrrhâ,' or the 'pilula aloës cum ferro,' or the "pilula ferri composita,' or the 'mistura ferri composita;' all of which undoubtedly possess very great efficacy in this respect, and may be confidently recommended to your employment; as, if there be such things as emmenagogues, these are certainly they."

It appears to us that Dr. Carbutt's observations are extremely incomplete. An emmenagogue is, after all, a relative remedy. Menstruation may be stopped by debility, by the agency of cold, by the existence of disease in some other organ than the uterus, by mechanical obstructions, and, in short, by many causes. The same remedy will not be applicable in all these instances—will not, in short, be an emmenagogue. If there be debility, tonics are emenagogues—if constipation, purgatives *may* be such—if another malady exists, its removal is an emmenagogue—in short, the emmenagogue, in many cases, is simply the correction of what is wrong in the system, or a part. Yet some medicines exist which exert, under many and different circumstances, a peculiar action on the uterus—such are the savine and the ergot of rye. The judicious practitioner is he who is able to distinguish the cases for general and for special remedies. What madness it would be to prescribe the steel, or galbanum, or savine, in a case of amenorrhœa, attended with plethora, with a foul tongue and a full pulse. Yet such madness is not unfrequently observed; and the pupil who is told that such remedies are emenagogues, without being informed of the various causes and characters of amenorrhœa, without being instructed that what is useful for one case is injurious for another, is apt, we should imagine, to be such a lunatic as we have hinted at.

*Case* 2. Maria Grant, æt: 17, admitted August 15th, 1833. Is a piecer in a cotton-factory, says she has not menstruated since last Whitsuntide, the last week in May, and has, from that time, felt pain in the stomach and bowels, not constant but at times, particularly towards night, very acute. Bowels rather loose. Tongue furred at the centre, red at the sides. Bad taste. Sleeps ill. Appetite bad. Pulse 98. No cough.

℞. Tincturæ Digitalis fʒj.
Misturæ Camphoræ f℥vj. Misce.
Sumatur f℥jss. quarter quotidie.

Pain in the stomach, aggravated after meals, with whitish tongue, and, perhaps, a little aceleration of pulse, followed hard upon this treatment. The digitalis was, in consequence, omitted, and leeches were applied to the epigastrium. The gastro-enteritic symptoms were relieved, and the pilula ferri composita was given. On the 2d Sept. the patient is said to have been discharged cured, but no mention is made of the re-establishment of the catamenia.

The digitalis obviously did no good in this instance. The general treatmen adapted to the symptoms was productive of most benefit.

We shall return to this volume on future occasions.

## NEW WESTMINSTER HOSPITAL.

This hospital, situated immediately opposite Westminster Abbey, is built for the reception of 240 patients, and is a very handsome structure, in the Elizabethian style of architecture, rendering it in good keeping with the Abbey. Ten wards were opened the first week in November, and several very interesting cases have occurred since. Sir A. Carlisle has given one clinical lecture on the management of burns and scalds generally, and Mr. Guthrie two with reference to particular injuries in the hospital, of which the following is a condensed summary.

Mr. Guthrie first expressed his satisfaction at having a case which would complete the picture of maniacal symptoms supervening on injuries of the head, which he had drawn to them a few evenings before, when on those injuries in his general lecture, and which he had said was rare. In this case the man, Samuel Charles Deacon, aged 37. admitted 17th November, at night, having fallen from a height on his forehead, which was much bruised about the right frontal eminence, although no fracture could be distinguished he was a good deal stupefied on being brought into the hospital, but was capable of being roused when spoken to sharply. He was bled to 16 ounces from the arm and had a cathartic dose; which was repeated until the effect was produced. He was bled again to the same extent, and the purgative medicine was repeated from time to time. The second blood drawn was buffed, pulse 100, soft and regular. Pain in the head slight; ordered to be shaved and cold applied. He lies in a state of indifference to all around him, but returns an answer when roused; mutters in his sleep at night.

On the 21st at night he began to be restless, wandering, and noisy, so that at last he was obliged to have a straight waistcoat put on—discharged his fæces involuntarily—pulse frequent but soft —pupils sensible to light, and not dilated—a blister was applied between the shoulders. I saw him on the 22d, and at first sight said that is one of the very cases I have been speaking to you about. This is not phrenitis, it is maniacal delirium, and depletion will do harm, the loss of 16 ounces of blood will probably kill him, whilst an opposite treatment may be effectual. He was sitting up in bed in the straight-waistcoat, and trying to get out of it, talking very incoherently and unconnectedly, but seems to be able to attend and to reply when spoken to sharply. The pulse quite regular, soft, and without power. I directed half a grain of the muriate of morphia to be taken immediately, and a grain to be administered at nine at night, after which he became more tranquil, and slept, although at intervals he was noisy. The next morning, the 23d, he was much better, the pulse being but 80 and fuller. He was purged, and the cold lotion applied to his head, and the morphia was repeated at night. The purgative and quieting treatment were continued until the 2d December, when he was able to sit up and walk about, and appears quite natural, and says he is free from pain in the head. On enquiring it was found that he was thought more or less silly by his friends, although he had never been actually out of his mind; and I believe in these cases there is almost, if not always, a tendency to mania in the habit. Some time ago I saw a case of a similar nature in this hospital. The man was bled largely instead of having purgatives and narcotics, and died, but on examination no signs of inflammation could be discovered in the brain or its membranes. The case is a remarkably good practical one, aud should be strongly impressed on your minds, for if you mistake the maniacal derangement for the delirium accompanying phrenitis, the error will be probably fatal. The peculiar vacant maniacal look in this case was very distinct, and as far as I have been able to observe it is usually so.

The case of William Isaacs, who lay in the next bed, under the care of Mr. Lynn, is not less interesting, as exemplifying many of the facts I have stated to you in the general lectures also. This man was run over by a cab on the evening of the 24th November, and died on the 3d December. The pulse during the greatest part of his treatment ranged from 94 to 100, and was full and regular, yet there was a considerable effusion of blood on the brain from the middle meningeal artery, which had given way on the inside of the dura mater, at which a large clot had formed, independently of that which was otherwise exposed towards and on the base of the cranium. As death approached, the pulse became very rapid and very small. According to the older, and even some modern surgeons, the pulse should have been slow, soft, and weak, if not irregular. Theory says it ought to be so, when there is compression of the brain, and in theory it may be true; but I tell you that, in practice, you will more often find it the reverse, and that the pulse often shews nothing, gives no diagnostic sign of the nature of the injury received. You have in this case the proof. The pupils of the eyes were never dilated, at least up to the last time I saw him, on the morning of his death. They were certainly not active under the influence of light, but they were fully sensible to it; yet there was compression of the brain to a considerable extent. I therefore tell you, that a dilated and inactive state of the pupils depends, not upon compression alone, but on compression on *a particular part* of the brain, and that part is not on the side of the middle lobe, or on the under part of it, or of the anterior lobe.

This man suffered exceedingly from shiverings and convulsions, which latter were very severe, and I ventured to predict a laceration of the substance of the brain prior to the post-mortem examination; and this was found on the left anterior lobe, resembling more, however, a softening and bruising of the part, than a clean tear or laceration, and which is always the case. The appearance is, however, very distinct, and will always be known after it has been once seen. This man's limbs were very paralytic, and he was never sensible, although he occasionally seemed to understand what was said to him. It was a case, also, of great interest, and merited your best attention.

There was no mark externally, or sign of injury, sufficient to warrant the application of a trephine; yet, if one had been applied just over the lower and inferior angle of the parietal bone, the extravasated blood would still not have been seen; but there would have been a sign to tell you it was there. It would have been the absence of the pulsation which is observed on the surface of the dura mater, when the parts beneath are sound, from the action of the arteries of the brain, and the dura mater, instead of remaining on a level, would have risen up more or less into the opening made by the trephine. This indicates the effusion below, whether of blood or of matter, and calls for an opening being made into it, for the evacuation of the blood or pus which may be beneath. I have done this in some instances with success. The result is more usually fatal.

In the bed opposite to these two men there is another, whose case is not less instructive. The poor man, William Holmes, aged 68, fell 23 feet on the ground, on the 23d Oct.; dislocated the left shoulder, and suffered a compound fracture of the ulna, separating it from the olecranon process. The wound enabled me to see the separated parts, and to ascertain that the cavity of the joint was opened. The inflammation was very severe, and the swelling of the whole arm considerable. Matter formed in various directions, and several incisions were necessary, some of them communicating with the joint. A great deal of constitutional irritation took place of course; he has also been much troubled by diarrhœa, and now, at the end of seven weeks, the external wounds are healing, the swelling is nearly reduced, and there is motion in the joint. The fractured ends of the bone are not quite in apposition, and direct union cannot immediately take place. I have hitherto kept the arm nearly straight, or as straight as it can be kept without bandages; but, as I see consolidation going on, and the prospect of the arm being about to become stiff or anchylosed, I shall place it in a semi-flexed or half-bent position, as it will be then more useful. The case has altogether been well worthy your attention; but my principal object in addressing you is with reference to the two positions. All the injuries of the elbow-joint require the bent position save one, and that a fraction of the ulna, at or near its olecranon process; and a mistake as to the nature of this injury is very distressing to the patient. A gentleman applied to me, some years ago, with the view of obtaining relief under the following circumstances. He had fallen on the under part of his right arm, which swelled exceedingly, and was treated by placing the arm in the half-bent position until it had entirely subsided, and all pain was removed. On attempting to use it, he found he could not straighten it by any muscular effort depending on volition, save that of applying the other hand to it, when it was effected with ease. If, for instance, he took up a piece of bread, and put it into his mouth, he could not bring his hand away by its own muscular efforts, but was obliged to put it down with the other hand. If he attempted to shave, he could only apply the razor to his face—all further motions he could not effect. The appearance which this defect gave rise to was very ridiculous, and not less disagreeable. On examination, I found that the ulna had been broken, immediately below the olecranon process, and that union had not taken place, either by bone or ligament, so that, on bending the arm, the separation between the parts, to the extent of half-an inch, could be distinctly felt, the end of the shaft of the ulna being apparently quite smooth. He had thus lost the use of the triceps muscle, and I, for the first time, found out all its many points, connected with its services, with which I was not acquainted. Few teachers of anatomy, I believe, describe among them, its being the principal muscle used in shaving; and, although they laud the size of the biceps in a blacksmith, I am not aware they praise that of the triceps in the barber. I told him the only thing to be done was, to make an incision over the end of the ulna, then scrape the ends of the bones, and bring them firmly in apposition, in as straight a line as possible. I did not, however, conceal the danger which might arise from inflammation of the joint, and believe the gentleman did nothing, beyond tying a spring, fitted on his arm behind, the effect of which I did not learn.

I have lately seen another gentleman, with an accident something resembling this. He was thrown out of his gig on his elbow, and broke the ulna joint below the smooth place, beneath the insertion of the triceps, and nearly at its apex, so as to make a pointed triangular end to the olecranon; the arm was bent, and, after the lapse of several weeks, I found that the union was incomplete, being effected by an extensible ligament, so that, when the fore-arm was forcibly bent, this pointed piece of bone appeared ready to force its way through the integuments. When the fore-arm was forcibly extended, the broken bones were brought into apposition. The error, in this case, consisted in bending the arm at the commencement of the treatment, and which was rather stiff in that position. This gentleman's anxiety was directed to the recovery of the bending power, or the removal of the stiffness, about which there could be no apprehension; mine was to effect a good union of the bones, and, after giving them some motion on each other, I recommended the arm being steadily extended for a time, with the hope that a better union might take place. The point of bone will, I have no doubt, be very much rounded off, so as to leave little fear of its protruding except from a blow, and the ligamentous union may suffice to give a fair degree of the use of the triceps. If not, the same sort of operation, only in a much less degree, will be necessary, and there will be little fear of mischief in the joint. In all these cases, the defect is not likely to be in bending the arm; a steady use of passive motion, duly applied, will always recover it. The straightening of the arm by the will of the patient is another matter. [Mr. Guthrie here explained the motions of these parts on the bones.]

When the point of the olecranon process is broken off just where the triceps is inserted, little or no displacement takes place, the insertion of the muscle forming a sort of hinge, which keeps the parts together, to say nothing of the ligamentous structures of the joint, which, on other occasions, or a little lower down, principally effects this object. This injury is not always easily detected, unless the surgeon has once seen it, and then it is made evident by bending the fore-arm as much as the patient can permit. In such a case, every motion of the arm and joint can be effected by the surgeon in a satisfactory manner. Yet he occasionally, in going through them, feels a crepitus, although very indistinctly. If, under these circumstances, he now bends the fore-arm on the arm, and places his finger on the upper end of the olecranon process, he will feel the crepitus under it, and ascertain the injury. There may be even a little displacement or separation, which renders the case quite clear. I did not understand the first case of this kind I met with, now many years ago, and kept the arm bent during the treatment, and my patient never could straighten it effectually afterwards. The second patient I met with was the articled student of a surgeon of eminence in this town, who had mistaken the case, as I had done before him. I was in time to point it out, and to effect a perfect cure. Sir Astley Cooper has since published on this particular kind of injury, and which is, therefore, well known to the profession at large.

In all cases of doubt, bend the arm; but as this kind of case, or the cases I have described, ought not to be cases of doubt, straighten the arm. It is easier to bend it at the end of a week or two, than it is to straighten it.

---

## PENNSYLVANIA HOSPITAL.

A long and minute report of eight cases that occurred at this institution is presented in our contemporary, the American Journal of the Medical Sciences, for November, 1834. The cases are possessed with interest, but the minuteness of detail is perhaps excessive, and the crowd of unimportant, if not impertinent, particulars serve rather to annoy than to instruct.

Reporters too frequently commit a capital mistake. They imagine that what is right on the part of the observer is also right on the part of the narrator—that, as a careful surgeon watches symptoms closely, a good reporter should state them as minutely. Yet a little consideration would show the absurdity of this idea. Observation is necessary in order to elicit truth, and unless that observation descends to small things, error may ensue. But he who wishes to inform others, is not to expose the whole process of reasoning by which he obtained the information he conveys. So, in a report, if every circumstance that was noticed is recorded, if the reader is informed, not only of all essential circumstances, but of unessential particulars too, his attention is overpowered by fatigue, and his mind is distracted by the multitude of petty objects that surround him. With this remark, we proceed to some of the cases before us. Five are instances of injury of the head. The first presents no feature to attract us.

CASE.—*Compound Fracture of the Skull, with Depression—Recovery.*

A labourer, æt. 30, admitted April 3d, 1834.

"While engaged in blasting rocks, a few hours before, he was injured by an explosion; he was alone, and is unable to state the cause of the accident, or attending circumstances; he was stunned, and, on recovering, walked nearly half a mile before he received assistance; he also states that, after he became sensible, was chilly and had vomiting.

A large portion of the scalp was turned off, and a portion of scull, about one and a half inches square, denuded of pericranium, on the inferior and middle part of right parietal bone; a fracture was discovered at this part, one inch in extent, into which a piece of leather, apparently a part of the lining of his hat, had been driven: there was also a small portion of the bone slightly depressed, circular, and nearly one-fourth of an inch in diameter, and a cut in the forehead, extending to the bone. The leather was removed from fissure, and, as he complained of severe pain, Tr. opii, gtt. xl. was administered; wounded parts of scalp kept in apposition by simple dressings."

A purge was given on the following day, and, on the 5th, he had slight fever, with but little headache. He was ordered to take a solution of emetic tartar. On the evening of the 6th, he became restless, complained of pain in the head, and had fever. He was bled to ℥xv. which caused faintness. The solution of antimony, producing vomiting, was discontinued. On the next day he was better, and was ordered merely salines. On the 12th, there was an abundant purulent discharge from the scalp. He went on well till the 25th, when he suffered from headache, some augmented frequency of pulse, and inability to sleep. The wounds of the scalp had healed, excepting over the exposed bone. A blister was applied to the back of the neck, and purgatives were subsequently given. The symptoms were relieved. On the 31st of May, the exposed portion of cranium, which was previously loose, was removed by cutting down upon the parts; the dura mater was healthy. The patient had occasionally slight headache, which a brisk purgative commonly removed. On the 31st of June, he was dismissed, cured.

This case exhibits an example of the fact, that compound fracture of the cranium with depression, though dangerous, is sometimes not succeeded by severe symptoms. The depression was certainly slight, the injury to the cerebrum was probably trivial, for the patient was affected with the symptoms of concussion rather than compression. The injunction to trephine, in *all* cases of compound fracture of the cranium, with depression, may at times be disregarded.

CASE.—*Compound Fracture of the Skull, with Depression—Convulsions—Death.*

A labourer, æt. 47, admitted April 23d, 1834, at 7, p.m.

"Is of intemperate habits, has generally enjoyed good health; was struck on the head by the crank of a crane, at which he was employed hoisting logs, about one hour previous to his admission into the hospital. The blow was received on the right side of the head, at the anterior inferior part of the os frontis, immediately over the orbit of the eye; was insensible for a few minutes after the accident; had no vomiting. When admitted, pulse was feeble and frequent; skin cool; rationality good; has a cut four and a half inches in length in scalp, which is turned off, exposing a considerable portion of the cranium, partly denuded of periosteum, a fracture by which the upper part of the orbit was forced down over the eye; a small loose fragment was removed; there is also a cut half an inch long at external canthus, from which there is slight hæmorrhage; eye uninjured. The depressed portion of bone was elevated to nearly its natural position, and light dressings applied; patient complained of no pain, and rested well during the night."

Nothing of consequence occurred till the morning of the 25th, when there were chilliness and increased restlessness; the pulse was feeble. At half-past one, p.m. the patient suddenly became convulsed and comatose, with pulse full and frequent; pupil nearly natural; strong flexion of arm on uninjured side during the attack. He was bled to ℥xx. and had cups applied to back of head, after which he became sensible. The articulation was now indistinct—the pupils were slightly dilated—the left eye was drawn strongly to the internal canthus—pulse frequent and weak—skin warm. At 11, p.m. the pulse was irregular—the respiration slightly stertorous—the left eye was fixed at the internal canthus—he was very restless. At 9, a.m. of the 26th, low, muttering delirium; increased restlessness; eyes as last reported, with more dilatation of pupil, and complete insensibility to light; surface of body, natural temperature. The separated fragments of bone were this morning removed, requiring only detachment from a small portion of scalp. He sank rapidly, and died at 4, p. m.

*Dissection.* The wound was of some size, extending from near the inner canthus of the right eye upwards and outwards for four inches and a half, and exposing the frontal bone for the distance of three inches. Dura mater opposite the seat of fracture, covered with a thick layer of dark coagulated blood, adhering strongly to the membrane, in the midst of which were two perforations, the largest of which would admit a crow quill. The dura mater and the arachnoid were each injected. Above and below the arachnoid of the pia mater, was a purulent cream-like fluid. The cavity of the arachnoid contained posteriorly half-an-ounce of dark fluid blood. The pia mater and contiguous brain were injected, and some ecchymosed spots were remarked in the cortical substance of the latter, those ecchymosed portions being softened in the centre.

The patient would appear to have suffered and died from the inflammation set up about the injured parts, rather than the amount of immediate injury. Yet the consequences of the inflammation, suppuration, and softening, were inconsiderable, and disproportioned to the rapid fatality of the case. The practical surgeon has frequent opportunities of observing instances of a similar description. It is probable that the circumstance of one individual being killed by a smaller amount of disorganization than is capable of terminating the existence of another, depends on their relative constitutional power.

The supervention of convulsions in connexion with the symptoms of commencing pyrexia, is interesting and was in all probability dependent on inflammatory action. Moderate pressure from extravasation or depressed bone will produce convulsions; but then febrile action is not present.

### CASE. *Fracture of the Skull—Phrenitis—Death.*

A boy, æt. 12, was playing on the roof of a three-storied house, from which he fell, on the afternoon of the 10th of August, 1834. At his entrance into the hospital, had a large ecchymosis with tumefaction of the eyelids of the right eye and parts covering the malar bone and temporal fossa; a fracture existed in both bones of both forearms, about two inches from the wrist. Intellect clear, but much agitation, and complained of pain in the arms, which were dressed by the application of splints and compress. Until 15th, slight increase of pulse and heat of skin; great restlessness; complained of pain in arms, constantly throwing them about; intelligence perfect, but very irritable, and great sensibility to impressions.

"On 15th, after sleeping quietly, (¾ths gr. of morphia having been given during preceding day,) had great increase of heat, no chill remarked, but extreme stupor, lying without the least attention to surrounding impressions. At 8, p.m., found him in the following state: decubitus dorsal; eyes closed; arms lying by his side; not much tossing about; skin intensely hot; face flushed; pupils much and equally dilated, little contraction on exposure to light; sensibility generally augmented; cries on moving the limbs; sight appears nearly perfect; hearing good; quickly relapses into the state of stupor when aroused; pulse 140, quick, regular; respiration regular, 28 to 30; no cough; constipation.

℞. Iced water to head; Pulv. seidlitz, No, ij.

16th. Very restless during night: frequent cries as in pain, alternating with stupor; some dilatation of pupils, and increase of sensibility; pulse 140, quick; head strongly bent backwards; cries if attempts are made to replace it; thirst great; no requests *for food;* face flushed; no rigidity; violent delirium, or during night cries; gives intelligible answers to questions if loud, and then relapses into a state of comma. VS. ℥xviij. After bleeding face pale; less violent delirium, pulse much more feeble.

In evening pulse less feeble than in

morning, some delirium: skin again hot. Twenty leeches behind ears; blister over scalp.

During the three days, 17th, 18th, and 19th, the following symptoms were observed. Delirium, quick, irregular, and noisy, with sometimes cries. On 19th, coma; pupils dilated during whole attack, not sensible to light on 18th or 19th. Strabismus, 17th, 18th, and 19th. The inclination of the head backwards increased in strength, but there was no evident rigidity of the limbs; no distortion of the features, unless slightly puffing of the mouth; countenance anxious, flushed; no replies to questions after 18th; constipation relieved by enemata or Seidlitz powders; no vomiting.—Deglutition impossible after 18th; meteorism of abdomen on 18th and 19th. Complained of pain in belly on 18th; pulse regular, very frequent, from 120 to 180.

Death 20th, at 9, a. m.

We have given the preceding case at length, because it is interesting to trace its progress, and not uninstructive to discuss its treatment. Let us glance at both.

A boy receives a severe fall upon the head, apparently unattended with the symptoms of concussion or compression; he has also fracture of bones of either forearm. For five days after the accident he has pyrexia, excessive irritability, and great sensibility to impressions. For these symptoms morphia is given, and after it, he falls into a state of stupor, with dilated pupils, flushed face, hot skin, and pulse at 140. For all this iced water is applied to the head, and he takes a Seidlitz powder. The symptoms increase—delirium alternates with coma—the head is bent backwards as in opisthotonos—the fever is decided. He is bled with some relief. The coma gradually grows more complete—strabismus is established—the inclination backwards of the head is aggravated—deglutition becomes impossible—and in ten days after the accident the patient dies.

The experienced surgeon cannot fail to recognize in this march of symptoms the characters and progress of inflammation of the brain or of its membranes. The *experienced* surgeon would also have acted, or probably he would have acted with more boldness and more judgment than were actually displayed.—Five days elapsed after the occurrence of the accident, an accident well known to be likely to occasion inflammation of the brain; yet, although there were fever, irritability, and morbid sensibility to impressions, no depletory treatment of any consequence was instituted. On the contrary, morphia was exhibited, a medicine which should ever be carefully avoided, or most cautiously employed for symptoms succeeding to injuries of the head. There is much in this that we cannot praise, much that a critical judgment might condemn. But more remains behind. A state of stupor, with dilated pupils, and decided fever, succeeded the employment of the morphia. Again, the experienced surgeon, perhaps even the well-instructed student, would have feared phrenitis, would have used depletion. The depletion that *was* used consisted in a Seidlitz draught.

The nature of the symptoms and inertness of the treatment might naturally lead the pathologist to look for inflammation in the cranium, and its consequences—lymph or purulent effusion. The strabismus and retraction of the head might induce him to suspect mischief at the basis of the brain. Let us pass to the examination of the body.

*Dissection.* "Dura mater distended; long coagulum in sinus; fracture with depression of both tables of os frontis on right side, just above the external angle of orbit; fracture extends through the orbitar plate in its whole breadth; just above this fracture the dura mater is torn, and a coagulum of black blood an inch in breadth exists. Summit of convolutions compressed; arachnoid dry; no serosity in pia mater; which is highly injected in its small vessels only; on the left side the pia mater presents a number of yellowish spots in the line of the vessels, not broader than from one to one and a half lines, and detached with the membrane; cortical substance gray-rosy; medullary moderately injected; consistence perfect; ventricles distended with about ℥iv. of troubled serosity; central parts diffluent; walls of ventricles softened to creamy consistence in a depth of from one and a half to three lines, white, surrounding injection; choroid plexus pale.—*Base.* A layer of greenish-yellow lymph, from three-fourths to one and a half lines in thickness, covered the pons, the optic and olfactory nerves, the medulla oblongata, the fissures of Sylvius, and the lateral fissures, extending through the fissures of Sylvius to the upper part of the hemisphere, and existing in a slight degree on the inferior surface of the cerebellum. This substance was beneath the arachnoid, which has a glutinous feel, and contains hardly ℥ss. of serosity. The substance had the following characters: inodorous, greenish-yellow, rather more consistence than pus, but easily broken by slight pressure without trace of granulations or other hard bodies. The cerebral substance of the base was of the natural consistence except just below the substance described, where it was whitish and pulpy. Pons varolii and cerebellum firm."

Cases judiciously treated are useful, because they teach us the use, the effects, and the value of remedies. Cases injudiciously managed are not useless, because they tell us, in intelligible accents, what we should avoid. The first are models—the second may be beacons.

CASE.—*Extravasation of Blood on the Spinal Dura Mater—Death.*

The injuries of the spine have not been hitherto sufficiently investigated Sir B. C. Brodie is engaged in their elucidation, and his judgment and experience will throw much light upon the subject. We notice the succeeding case, as an instance of serious injury of the spine, independent of fracture of the vertebræ.

A seaman, æt. 24, admitted April 26th, 1834. A short time previously he had fallen from a height, and produced a lacerated wound of the elbow-joint. He had also a scalp-wound, exposing a small portion of the cranium, and a severe contusion over the lumbar vertebræ. He was insensible for a few minutes after the fall but he then recovered; he could move his extremities without difficulty.

On the next day he had some fever.

On the next, he could not move the inferior extremities with facility.

On the third day, he complained that he could not "feel his legs," and was totally unable to move them.

On the fourth day, the paralysis of the lower extremities was complete. He complained of numbness and cramp in the uninjured arm. We should state that erysipelatous inflammation had seized upon the injured one.

On the fifth day, early in the morning, the patient was suddenly attacked with dyspnœa, anxious countenance, incapability of articulation, frequent and feeble pulse, skin cool and bathed in perspiration. The respiration became more and more laborious, and, at 9, a.m. he died.

*Dissection.* In the head, much blood is said to have existed on the exterior of the dura mater. Yet it is not stated that the blood was extravasated, and the symptoms were not indicative of such being the case.

"Muscles opposite lower dorsal and lumbar vertebræ softened; fibres scarcely perceptible, infiltrated with blood and purulent liquid; no fracture of processes. On exterior of dura mater is a layer of half-coagulated dark blood, extending throughout all the dorsal and lumbar vertebræ. Arachnoid containing a moderate quantity of serum; pia mater slightly injected. Consistence of medulla good, except about lower part of dorsal vertebræ, in extent of one and a half inches, and in the last inch where the medullary portion is a little yellowish, and rather less consistent than elsewhere."

The lungs were gorged with blood.

No other lesions of any consequence existed.

As the injury, in this instance, was not simple, the symptoms were not distinct, nor the produce of a single lesion. It is probable that the condition of the injured arm contributed greatly to the patient's death. Yet the principal interest, at all events in our eyes, is connected with the spine.

The absence of paralysis at first, and its subsequent gradual establishment, would apparently depend on one of two causes—sanguineous extravasation slowly taking place, or inflammatory action. Effusion of blood would take place immediately on the patient's recovery from the primary insensibility—or it might be the result of secondary hæmorrhage. If the former, the paralysis would be early developed—if the latter, it would occur, like the secondary hæmorrhage, suddenly. Such are the circumstances which have been observed in the analogous case of injury of the brain, and such would probably take place in spinal injury. We say probably, for our knowledge is limited and indeterminate.

But, in the present patient, the paralysis of the extremities was not developed early, was not established suddenly, but gradually occurred after an interval of three days, and was accompanied with fever. It was apparently the paralysis dependent on inflammatory action. Now inflammation of the medulla, after injuries, usually occasions softening of its substance. The investigations of Sir B. Brodie are conclusive with regard to that. In this case, we discover diminution of consistence, and yellowness of colour in the lower inch of the dorsal medulla.

The case, we repeat, is possessed of interest.

We pass over an example of purulent deposite in the lung after amputation. We have, at various times, devoted some space to the affection, and probably we shall present a series of cases in an early Number.

The only fact remaining for notice, is an instance of phlebitis, succeeding the operation for varicose veins. We had thought that the operation was abandoned. It is difficult to determine whether it should be deemed more useless or more dangerous.

*Case*. John Farrell, æt. 30, workman in a chemical laboratory, was the third in a series of operations for varicose veins, performed by Dr. Harris in the Spring of 1834, and the only one attended by any unpleasant symptoms. The operation consisted in the removal of about three-fourths of an inch of the diseased vein, from the part that passes along the inner side of the knee.

He was admitted into hospital, on the 19th of April, for an ulcer on the right leg, accompanied with varicose veins. The operation was performed on the 27th.

"Patient did well till 30th, when he complained of pain about the knee, around which is some erysipelatous inflammation. A red line is also observed to extend upwards in the course of vein to within an inch or two of the groin, with evident thickening and tenderness on making pressure upon the part. Pulse 100, intermits every fifth beat; countenance anxious; tongue whitish; bowels not open. Ordered fifty leeches along the vein, purge with magnes. sulph.; cold mucilage to knee.

May 1st. Inflammation of vein has increased but little; patient has some fever: pulse 100, with fewer intermissions; bowels freely purged by medicine yesterday; erysipelas extending; patient much depressed; fifty leeches along vein; followed by emplast. vesicat.; mist. neutral, ℥ss. q. 2. h."

The symptoms after this subsided gradually. It was the 1st of June before he was sufficiently recovered to be discharged.

We have nothing to say in favour of the operation. We close the present report. The facts it contains are valuable, and no doubt authentic. Yet we would venture to hint to the reporter, that a little more attention to elegance of language and a little less to trivial particulars, would materially enhance the value of his work. He seems to have imitated the tiresome verbosity of the French, who frequently write an anatomical catalogue when they ought to present a pathological digest.

## ST. THOMAS'S HOSPITAL.—(BIS.)

### ON THE TREATMENT OF SYPHILIS WITHOUT MERCURY.

That men should disagree in matters of

opinion, in inferences drawn from facts or premises, is natural and consistent with what might be expected. But that they should differ on the facts themselves, that one man should term an object white, and another affirm it to be obviously black, is a monstrous and seemingly incredible opposition.—Impossible as it might appear, the contradiction is too common to be doubted. Where interest sways, or passion blinds, the philosopher may condescend to explain and to excuse. But where these human frailties do not conspire to distort the observation and to warp the judgment, charity herself finds it difficult to offer a favourable solution of the glaring inconsistency.

This general remark may fairly spring from a survey of the statements which amaze and confound the critic and the profession, with respect to the treatment of syphilitic symptoms. One set of observers assert that syphilis requires mercury for its removal;—the other deny that mercury is necessary, nay, they even affirm that the disease is better cured without it. Both parties found their opinions upon observation —upon *facts*. Yet some of those facts must surely lie, for Nature is true to herself. Who shall determine on which side truth is to be found?

We have had much experience in venereal maladies—have made some experiments and witnessed more. Without attempting to arrogate to ourselves the office of the umpire, we may candidly state in general terms the results of the observations we have made. Our readers will attach what importance they think fit to our conclusions, for in litigated questions of this description something must depend upon the weight of character.

We should premise that this article is based upon two papers; one by Dr. Williams, of St. Thomas's Hospital—the other by Dr. Green of Bristol. The first is contained in the Medical Gazette;[*] the second will be found in the second volume of the Provincial Medical Transactions.

The great point d'appui of the antimercurialists is the army medical reports. Those reports display a formidable battery, from which the mercurial practice is assailed. Perhaps the most forcible statements in those documents, are contained in the following extract from the paper of Dr. Green.

"The reports I have next to call attention to, were circulated from the Army Medical Department, in April, 1819, and will be found in Dr. Hennen's work; they state as follows:—'That since Dec. 1816, to Dec. 1818, there appear to have been treated, for primary venereal ulcerations on the penis, (including not only the more simple sores, but also a regular proportion of those with the most marked characters of syphilitic chancre, as described by Hunter and other writers) 1940 cases.' 'That of these 1940 cases so treated, 96 have had secondary symptoms of different sorts;' of these 96 cases of secondary affections, mercury was had recourse to in 12, for various reasons stated in the report. In the 1940 cases of primary symptoms, mercury was used in 65, for reasons also assigned; if we deduct the 65 and 12 cases in which mercury was used, from 1940 reported, 1863 *cases remain completely cured without mercury*. The report goes on to state, 'that the average period required for the cure of primary symptoms without mercury, when bubo did not exist, has been 21 days; with bubo, 45 days.' That the average period for the cure of secondary symptoms, without mercury, has been from 28 to 45 days. '*That every man treated without mercury, has been fit for immediate military duty on dismissal from the hospital.*' In the same period, 2827 cases of primary symptoms were treated with mercury; secondary symptoms occured in 51 of them. The report states that, in the majority of these instances, there were good grounds for believing that *the constitutional symptoms 'were more severe and more intractable than when mercury had not been used for the primary sores.'* Two more thus treated

---

[*] Med. Gaz. April 12th, 1834.

*with mercury*, were discharged the service, *on account of the injury their constitutions sustained from the treatment.* The average period required for the cure of primary symptoms, without bubo, was 33 days; with bubo 50 days; and for the cure of secondary symptoms, 45 days. *Here, then*, we have *a record of* 1833 *cases, of every form and stage of syphilis, cured without mercury;* and in not one instance did any unfavourable results follow the treatment; foul ulcerations, caries of the bone, broken down constitutions, and a loathsome death, were not here to be seen. The evidence thus presented is too strong to be disputed, and, perhaps, could have been collected from no other source than military hospitals, and in no other practice could the consequences of the treatment be better observed, as, of course, the men remain under the personal observation of their surgeons after they are cured. I need hardly say, that the enquiries were conducted with that fair, candid, and impartial spirit, which should ever mark the investigations of men searching for truth; if any triumph did follow their exertions, it was that of truth over error."

When we add to this the result of the experiments of Mr. Rose, we have laid before our readers the leading statements contained in the medical reports of the army—statements to which the anti-mercurialists constantly refer with confidence and triumph—the triumph, as they tell us, of truth over error.

"The late Mr. Rose, surgeon to the Coldstream Guards, first stated to the profession in this country,* the important fact, that all cases of the primary and secondary symptoms of syphilis could be cured without mercury. For a year and three quarters he treated, at the regimental hospital, in London, all cases of venereal diseases occurring in the soldiers of the Coldstream Regiment of Guards, without mercury; he observes,† I 'have certainly succeeded in curing all the ulcers of the parts of generation, which I have met with in that period, with the constitutional symptoms to which they give rise, without the exhibition of mercury,'—Mr. Rose treated more than 120 cases in this way, and no unfavourable results whatever followed the practice; he adds,‡ 'caries of the bone, and some of the least equivocal symptoms did not occur. Constitutional symptoms were, in most instances, mild, and, in some, so slight, that they would have escaped notice unless carefully sought for.' In not one instance was there that uniform progress, from bad to worse, which was considered an essential characteristic of true syphilis. Mr. Rose's paper is well worthy of attentive perusal, as well on account of the facts it contains as of the spirit of cautious enquiry evinced in it. Mr. Guthrie next published a paper on the same subject: he had treated nearly a hundred cases of primary sores without mercury, and considers it an established fact, that§ 'every kind of ulcer of the genitals, of whatever form or appearance, is curable without mercury.' He considers that, in some cases, a gentle course of mercury will expedite the cure, but does not consider it a specific for the venereal disease.

Dr. Green of Bristol, who quotes and who admires the foregoing reports —who endeavours

> To swell the triumph and partake the gale,

has his own experience to confirm their accuracy. His modesty induces him to suppose that his testimony is feeble, yet his candour compels him to present it, in the hope and with the object of inducing surgeons to regard the anti-mercurial treatment without distrust.

For the last seven years, he has

---

* "Mr. Furguson had previously stated, in the 4th vol. of the Med. Chir. Trans. that the venereal disease was successfully treated in Portugal, without mercury."

† Medico-Chirurgical Transactions, vol. viii. p. 355.

‡ Med. Chir. Trans. vol. viii. p. 420.

§ Ibid. p. 571.

treated nearly all the cases of venereal that came before him, without mercury. In a few instances, indeed, he has employed this remedy, where the symptoms got into an indolent or chronic state. He "tried the stimulus of mercury" in such cases, precisely as he would have done whether the symptoms were of venereal origin or not, with the view of inducing healthy action in the local disease; or he has given it to alter the secretions from the stomach and bowels, or to improve the general health where it seemed required.

"I have kept an account of 100 cases of the venereal disease, treated by myself, without a particle of mercury used internally or externally. In the selection of these cases, two objects have been kept in view, namely, that the primary sore should, in some degree, possess the characters of the Hunterian chancre, 'a circular, depressed, and sloughy sore, with an indurated base;' and I have preferred taking notes of those cases where patients resided in Bristol, that I might have an opportunity of watching the consequences of the treatment, to ascertain if any symptoms of a contaminated constitution should result from syphilis, cured without its supposed specific."

Our crippled space will permit us to offer no more than a summary of our author's facts—a still more brief account of his opinions.

And first of his facts.

1. All the primary sores exhibited more or less resemblance to the Hunterian chancre. They were treated with sedative and astringent lotions, or with simple ointment as one or the other best agreed. The average period which they took to heal was a fortnight to a month. In some of the cases, the local inflammation accompanying the sore required local or general blood-letting; in others, thickening and induration remained for some time after the sores were cicatrized, but spontaneously subsided.

2. Of 100 cases of primary venereal sores thus treated, buboes supervened in sixteen. Of these buboes, six suppurated. The buboes which did not suppurate, were removed, on an average, in about six weeks; in two cases, however, a chronic enlargement of the inguinal glands remained for a longer period, one four, and the other seven months; but both of these patients were of decidedly scrofulous habits. The buboes which did suppurate, were healed within two months from their appearance, except one, which remained open four or five months; this patient was also of a scrofulous constitution; ultimately, the whole sixteen cases of bubo were cured.

3. Constitutional affections, of one kind or another, followed in nine cases; these secondary symptoms were, cutaneous eruptions, sore throat, pains in the limbs and periostitis. The affection of the skin assumed varied forms; it was papular in three cases, pustular in two, vesicular in one, vesicular and scaly in two, and in the last it was a mixed form of eruption, papular in the beginning, followed by a general redness, and ending in a scaly condition of the surface. Two of the papular eruptions were so slight, as scarcely to deserve attention. One was a well-marked specimen of "lichen simplex;" it lasted about three weeks. One case of pustular eruption displayed a striking resemblance to small-pox;—in four months it was removed. The two cases of vesicular and scaly eruptions occurred in delicate and strumous persons; one lasted between three and four months—the other nearly seven. The mixed form of eruption was gone in five weeks.

4. Sore throat occurred in four cases; in three it was conjoined with cutaneous eruptions. We will only observe of the ulceration of the throat that it was extensive, superficial, and covered on its surface with a thin layer of adherent lymph.

5. Periostitis occurred in two cases—broadly marked in one, and faintly in the other. In one, the bones of the head were affected; the complaint was obstinate, but yielded at length to counter-irritation. In the other the tibia was the bone attacked; no treatment was required in this case.

6. There was not one instance of iritis.

Dr. Green deems it necessary to mention the unfavourable symptoms that were noticed. They are neither numerous nor grave.

"In one case of tedious cutaneous eruption, the chain of lymphatic glands of the neck became swollen, and they have remained enlarged since. In another case of obstinate scaly and vesicular eruption, the skin remained discoloured, in patches, for nearly twelve months."

Such are the facts of Dr. Green. His opinions may be analytically reduced to this:—that it is absurd and false to consider mercury a specific for syphilis. The belief in its specific agency is, he thinks, only worthy of a place in the manual of some Turkish Doctor, or the hoarded secrets of some copper-coloured Indian. He denies that mercury has any power whatever over the syphilitic poison itself—a theory, he observes, unsupported by facts, which has never yet been proved, and never will be. Warming as he proceeds, he throws down the gauntlet against *all* specifics; "a belief in which is to say the least of it, a very unscientific faith."* To sum up—he conceives that, cæteris paribus, the venereal disease can be better cured without mercury than with it—that worse consequences follow when the latter is employed than when rejected—and, therefore, that its use should in general be abandoned. Yet he owns that it is sometimes beneficial—but *not* as a specific; his hypothesis and facts continue safe, his creed is not alarmed, at exhibiting the mineral, *not* as a specific.

"The cases in which mercury may be employed with advantage, appear to me to be those in which the symptoms get into an indolent state, and become a chronic disease. Here mercury may be of service, if there be nothing in the constitution of the patient to forbid its use. Its chance of doing good in these cases, results not from any specific or antisyphilitic power belonging to the remedy, but from the well-known influence mercury possesses of controlling and altering morbid actions, altogether devoid of any specific character; but, if there be any difference between its influence over specific diseases, and those of a different nature, experience tells us it is this, that while mercury alters and subdues simple morbid actions, it alters and sometimes aggravates those of a specific nature, such as the phenomena resulting from the venereal infection."

Dr. Williams comes next upon the stage. If Dr. Green has prepared the bane, Dr. Williams presents the antidote—if the former denounces mercury as a specific—the latter considers its powers undeniable.

His arguments in favour of those powers are brief—they are general deductions, rather than circumstantial statements.

1. Dr. Williams admits, as it is impossible to deny, that syphilitic, that is venereal, sores, and, indeed, venereal secondary symptoms, will in certain instances terminate spontaneously. But he contends that, where mercury is not given, the disease is much prolonged, and secondary symptoms are more frequent.

"It is necessary, also, to ensure a favourable result, that the patient should submit to a painfully long confinement to his bed, and not only that he should abstain from every indulgence, but must submit to an exceedingly low or spoon diet. A spontaneous cure, therefore, is a termination little in unison with our habits of active life, and some remedial mode of treatment is not merely desirable but necessary. In the cure, then of syphilis, mercury in greater or less doses, and introduced into the system either locally or by the mouth, or by inunction, is unquestionably, according to our present experience, the great, and indeed only specific remedy by which we are enabled to control and subdue the primary action of this baneful poison."

---

* The Doctor's notions and our's on science may, probably, be widely different. His science may consist in something intellectual, metaphysical, and abstract—our's is the homely induction from fact: his goddess may be throned in the æther or the clouds—our's walks amidst the haunts of men; he may deem it unscientific to believe that sulphur is a specific for the itch—our science is unable to dispute or to contemn the humble truth.

2. The cure of the secondary symptoms Dr. Williams thinks to be a problem. Yet he makes a faint attempt at its solution.

"The problem of the cure of the secondary symptom is not of such easy solution. It has been affirmed that these symptoms are aggravated wherever mercury has been used for the cure of the primary sores: of this, however, I entertain the strongest doubts; for it is agreed that secondary symptoms much more frequently occur when the primary symptoms have been allowed to terminate spontaneously than when mercury has been used, and yet it seldom happens, when there is so strong a tendency to disease,that such disease, when excited, is mild. It is a fact also, that before mercury was used for the cure of syphilis, it took its name from the more hideous of the forms of its secondary symptoms. In Lisbon also, where mercury is little used for the primary sores, every military surgeon admits that more mutilated faces are to be seen than in any other town of the same size in Europe. But whatever may be the fact, it is certain that the cases of secondary symptoms which present themselves at the London hospitals are of great severity, and shew little tendency to a spontaneous cure. On the contrary, the long and extreme sufferings of the patients, and their worn and emaciated frames demand, prompt and immediate relief. In the cure then, of the secondary symptoms mercury and sarsaparilla are the only remedies that at present maintain any character.

The medicinal properties of the latter substance, however, are so little determined—the cases in which it is useful so little agreed on—that Mr. Hunter, and also many most eminent physicians and surgeons, have abandoned it as altogether inefficient; and it is hardly an exaggeration to state that the majority of the profession, in the present day, rely on mercury as the only remedial agent in all forms of the disease.

If we look, however, to the laws which govern other poisons, we find that their different specific actions are only subdued by many and even opposite remedies; and consequently we might expect that although mercury might be eminently useful in some stages of syphilis, still, that in combating so multiform a disease, many different modes of treatment would be necessary. In paludal disease, for example, as long as the action of the poison is limited to inducing intermittent fever, unaccompanied by any local disease, quinine is a certain and specific remedy. But no sooner are the secondary affections of that poison established, as inflammation of the liver or spleen, than calomel is the specific medicine; quinine being either unavailing or injurious. An equally remarkable change of treatment is required should the poison of scarlet fever fall upon the larynx or peritoneum, or on the synovial membrane of the joints. It will be plain, therefore, that mercury, the great specific in the primary affections of syphilis, is of doubtful efficacy in its secondary affections; and every practical physician knows how often this powerful remedy totally fails in relieving many of the most distressing forms of the disease."

Such are the arguments adduced by Dr. Williams, in his general support of a mild mercurial pracitce. The remainder of his paper is occupied with some reflections upon nodes and venereal ulceration of the throat. Our business is at present with the question of exhibiting or withholding mercury for the cure of syphilis. We must, therefore, disregard the observations of the Doctor, which have not particular reference to this subject. Yet we cannot agree with some of his opinions, and his paper may furnish, at a future opportunity, the peg on which to hang some critical remarks.

When we look at the present condition of the argument, we find that it assumes the following aspect. On one side it displayed an alluring and imposing array of facts—cases in the mass of a specious character, which subdue the reasoner by their demonstrative appearance. On the other hand, we discover the majority of the profession, and its experienced portion in particular, clinging, perhaps with prejudice, but certainly with pertinacity, to the doctrine which those facts are calculated to subvert. Cherished errors and prejudices are strong, but truth, after a time, is stronger; and it does appear to offer primâ facie evidence in favor of mercury, that the anti-mercurialists so far from gaining ground are daily losing it.

There are reasons for believing *that* a keen examination of the Army Medical Reports would not lead the impartial reasoner to conclusions so unfavourable to the value of mercury, as Dr. Green and others believe; *that* mercury was resorted to in cases which had resisted the non-mercurial treatment; *that* out of a certain number of sores promiscuously taken many will not be syphilitic at all; *that* if sores be not syphilis, mercury given as a specific would be mischievous, and, consequently the comparison of numbers with numbers treated each way is not a fair one; the point at issue being mercury or no mercury for syphilis only; *that* the experiments were made by men, some, at least, of whom were ill-informed, both of the forms and nature of syphilis, and the proper mode of exhibiting mercury; men with no hospital experience, an imperfect education, and the liabilities to error arising from the enthusiasm excited by the support of a novel doctrine; *that* with all these disadvantages—the application of mercury in cases in which it should not be applied, its exhibition in proper cases in an improper manner, the necessary incompetence of many of the experimenters to conduct such vast and such nice experiments, and all the fallacies which we will not name—with all these disadvantages, the careful consideration of the whole of the reports will still leave the balance in favor of mercury.

Perhaps the investigations of the late Mr. Rose were less likely to terminate in error than those of many of his associates. Those investigations are constantly appealed to as decisive evidence against mercury. Mr. Rose became surgeon to St. George's Hospital, and we can state with confidence, for many gentlemen know the fact, that he *abandoned* in later life the non-mercurial treatment—that he confessed its inefficacy—and employed the remedy which his statements are frequently brought forward to condemn. We may mention an instance, which came, among others, to our knowledge. A young physician contracted a sore upon the prepuce. He went to Mr. Rose. The latter gentleman merely observed, "I would advise you take a course of mercury." "Oh! but," said the Doctor, "it can be cured without it." "Never mind that," replied the anti-mercurialist, "if you take my advice you'll take mercury." Mr. Rose was an honourable man, and would never have published what he did not believe to be true. He reluctantly changed his opinions, but he did change them.

Mr. Guthrie is adduced as another authority against the use of mercury. We would ask this question:—*does* Mr. Guthrie now pursue the non-mercurial practice? We should fancy that he does not.

The length to which this article has stretched prevents us from offering many observations arising from our own experience. Yet that experience has not been narrow in the venereal disease. In our next number we shall make some more extended remarks upon the subject.

The facts which we have witnessed, and the experiments which we have made have been sufficient to convice us of the utility, nay, necessity, of mercury. Like many others, we were charmed with the plausibility of the Army Medical Reports—we imagined that the time was come when syphilis could be treated safely and judiciously without a course of mercury. We were soon undeceived. The great opportunities afforded for observation and for practice in the wards of the Lock Hospital speedily disclosed to us the important truth, that whatever might be the case with respect to the venereal disease elsewhere, no doubt could be entertained of its being best cured by mercury *there*. We do not disbelieve the army surgeons, we do not dispute the authority of Dr. Green, but we believe the evidence of our own senses, and that evidence is in favour of mercury.

Our observations may be reduced to the following general statements:—*that* sores possessing the characters of syphilis, when treated without mercury, are remarkably prone to occasion secondary symptoms — *that* secondary symptoms, treated without mercury, are in general extremely obstinate, and in many cases appear to promise no natural termination — *that*, upon the other hand, the same kind of sores and the same description of secondary symptoms, yield with comparative facility to mercury, judiciously exhibited — *that* some sores require but little mercury, and some probably require none—*that* some symptoms usually reputed secondary, such as rupia, sloughy ulceration of the throat, and nodes, are occasionally benefited, and as often aggravated by the employment of mercurial medicines—and, finally, *that* mercury, properly administered, is not only valuable, but, practically speaking, indispensable for lues. Such are the conclusions we have drawn from observation and experience, in the Lock Hospital and out of it. That observation has been minute and diligent, if it has not been successful; and, without attempting to play the braggart, we will say that our experience has not been inconsiderable. We went to the investigation with a bias against mercury; the inquiry has given birth to a conviction for it.

The fact is, that there is much, very much, to be done in the examination of the venereal disease. We possess no really good work upon the subject. Hunter's is mischievously wrong—the more modern productions are less boldly erroneous. Many syphilitic symptoms are not at all, or imperfectly delineated—other symptoms are described as syphilitic, which are dubious in their origin or character. Mercury is either not used, or it is abused—it is withheld when it would be safety, given when it is destruction. Scylla and Charybdis are on either side, and to avoid the one, the profession too commonly rush upon the other. In short, venereal symptoms are not sufficiently descriminated, mercury is not appropriately exhibited, and the result, as might reasonably be expected, is confusion.*

---

* In the foregoing article, want of space has compelled us to omit our facts, and to mutilate our opinions. In a succeeding Number, we shall endeavour to point out the symptoms that require, and the best mode of giving mercury.

## MISCELLANIES.

### CASE OF HEPATIZED SPLEEN. By JAMES EDWARD, Surgeon, Forfar.

WE are indebted to Mr. Edward, for several interesting facts. The following has lately occured to his observation, and is contained in a letter which he has addressed to us.

"The subject of this case was a very laborious tradesman, of temperate habits, forty years of age. He was suddenly seized with acute pain in the region of the spleen, immediately on the inside of the left margin of the ribs, which was increased by pressure, and extended up to the shoulder of the same side. It was attended with a full, quick pulse, heat, thirst, and other symptoms of inflammatory fever. By venesection both local and general, and other antiphlogistic remedies, these symptoms were for a time alleviated. The pain in the side was a pretty constant symptom during the first twenty months of this disease; at the end of which a tumor of an oblong figure could be distinctly felt through the parietes of the abdomen in the left side. This tumor gradually increased till it occupied the whole of that region. For several weeks previous to his death, which happened in November, 1833, after having been ill rather more than three years, his mental faculties were so completely destroyed that he did not recognize his most intimate friends.

On a *post-mortem* examination, which was held twenty-four hours after death, the abdomen having been opened, an enlarged spleen was removed, of an oblong figure, convex externally, and concave internally, the substance of which was similar to that of the liver; it weighed six pounds, eight ounces. With the exception of a small cyst in the left kidney, the rest of the abdominal and thoracic viscera seemed to have been perfectly sound. The brain was not examined.

Forfar, Dec. 16th, 1834."

### MEDICAL EDUCATION AND ORGANIZATION.

We request the attention of our brethren to the following system of medical polity acted on in the Austrian empire, and from which some valuable materials may be drawn for the construction of the social edifice that may be expected soon to rise in this country. We certainly should not be much inclined to go to the banks of the Danube for political tenets or doctrines; but science and especially medical science, is the growth of no country—and a Metternich might probably legislate as wisely in physic as a Melbourne. We shall introduce the Austrian code of medical police without further preface.

### *Present System of Medical Education, and the Arrangement of the Medical Profession, in the Austrian States.*

The laws by which the profession in Austria is governed, were enacted in the reigns of Maria Theresa, of Joseph II., and of the Emperor Francis I. The object is the improvement of medical education in the schools, the supplying of suitable practitioners for the people, and the regulation of the *pharmaciens*, who alone are permitted to deal in drugs and medicines. They further contain clauses of great severity for the checking of charlatanism; and in order that the magistrates may be fully acquainted with every thing relating to hygiene and medical police, appointments are provided in the several districts for a body of well-instructed and experienced medical persons, specially entrusted with this duty.

#### I. SYSTEM OF EDUCATION.

*There is no distinction made, in the Austrian universities, between the education of physicians and that of surgeons. The students destined for either pursuit must attend the courses of both branches of the healing art, and not until they have com-*

*pleted their curriculum are they allowed to choose which they shall practice: but they may practice both if they choose, and be found properly qualified.*

The qualification for a doctor of medicine or surgery, consists in a *five years' attendance of lectures in some national university;* the three first years being devoted to the study of the collateral sciences and the theoretical parts of medicine, and the last two being employed in special therapeutics and practice, at the bedside of the patient. The following is the order in which the several branches are studied:—

| | | |
|---|---|---|
| First Year, | 1st Semestre. | A general introductory course of medicine and Surgery.<br>A course of Anatomy.<br>A course of special natural history. |
| | 2d Semestre. | The courses of anatomy and natural history repeated.<br>A course of botany. |
| Second Year, | 1st Semestre. | Anatomy and physiology of a more advanced character.<br>General chemistry. |
| | 2d Semestre. | Anatomy and physiology continued.<br>Pharmacy and animal chemistry. |
| Third Year. | 1st Semestre. | 1. General pathology (etiology, semeiology, and general therapeutics.)<br>2. Materia medica and chirurgica, dietetics, and art of prescribing.<br>3. Theoretical surgery (general and special pathology of surgical disorders.)<br>Midwifery. |
| | 2d Semestre. | Courses 1, 2, 3, preceding continued.<br>Bandages and surgical instruments, from June till the end of the medical year. |
| Fourth Year. | 1st Semestre. | 1. Special therapeutics of internal maladies.<br>2. Internal clinique. |
| | 2d Semestre. | 1 and 2 preceding continue.<br>Veterinary medicine. |
| Fifth Year. | 1st Semestre. | 1 and 2 of preceding year continued.<br>Forensic medicine. |
| | 2d Semestre. | 1 and 2 continued.<br>Medical police. |

It is to be observed, with reference to clinical instruction, that, both in Austria and Prussia, students who have completed their theoretical courses are divided into practising pupils and assistants; the former being entrusted with the treatment of a certain number of patients, whom they visit under the inspection of the clinical professor. If they acquit themselves well, he does not interfere; if not, he instructs them in the questions which they ought to put. After each visit, the professor interrogates the pupil as to the class, order, and species of the malady, the prognosis, and the indications. If the pupil be right, he is requested to prescribe aloud. An assistant is attached to each practising pupil, who goes round with him, and in the course of six months becomes a practitioner himself.

The lectures on physiology, pathology, materia medica, and special therapeutics, as well as the clinical remarks at the patient's bed side, are delivered in Latin ; in all the other courses the German is the language employed. In Hungary, Poland, and Italy, the language of each country respectively is used.

*Previous to admission to the medical schools, the pupil must produce a certificate of having attended a three years' course of humanity in some national school; and pupils are arranged, in general, in three classes; the first consisting of those who have answered best, and obtained the title of* eminent, *the others according to their respective merits.* Diligence and moral conduct are high recommendations in the certificate for admission; in fact, the law expressly declares that this must be seriously attended to, in order to exclude, as much as possible, from the study of an art so important and difficult as that of medicine, all those who are not more or less distinguished by their attainments and good conduct.

Matriculation is not attended with any expense.

*Students are forbidden to smoke cigars; or to frequent drinking-houses.*

No student can advance to a higher class without having attended that immediately preceding it; and he must pass an examination. If his answering be but second-rate, he must go through his last courses again ; and if upon another trial he be found deficient, his name is erased from the list of medical students, and he is precluded from entering any other national university.

Every professor is bound to examine his class once a week publicly, for at least half an hour. The results he must note down, for the better arrangement of the classes. At the end of every semestre, the pupils are examined in their previous courses; the first examination takes place in the latter part of March, the second towards the end of August; the particular day and hour being announced a month previously. The director and a commissioner of instruction are obliged to attend at these trials; and the professors are enjoined by the law to be as strict as possible, and not to allow themselves to be carried away by an ill-judged indulgence. It is during the first year that they are expected to be most severe, in order to get a timely riddance of those students who are dull or negligent, and to secure the state against the danger of having ignorant physicians or surgeons admitted to practice. In the certificates given on these occasions, not only the abilities of the pupil are set forth, but his moral conduct is noted.

The fees paid by each student amount to 30 florins (about £3.) a year—3 florins a month. These charges go chiefly to the support of a certain number of poor but respectable students, who belong to large families of straitened means, and are distinguished for their diligence and good behaviour.

In order to be admitted to the final examinations, the pupil must shew that he has acquitted himself well at the weekly ones, as well as at those at the end of each semestre. The Dean of the Faculty is obliged to pay special attention to this rule, or otherwise forfeit 20 florins to the general fund. Two students cannot be examined at the same time. The judgments of reception are *Satis*, *Bene*, or *Valde bene*. If two professors vote for the candidate's rejection, he must be examined over again at some future time,going through certain courses prescribed to him in the interval. If he decline this, he is not entitled to have his examination fees refunded to him; but if he submit to a second trial, he has nothing additional to pay. Not so, however, if he be rejected a second time ; he must pay his fees afresh for a third examination. Nobody can be examined more than three times ; a third rejection disqualifies the candidates from ever practising in Austria.

Previous to the admission of the candidate to examination, he must produce an account of two medical cases treated by himself, and also a report in legal medicine. These papers must be forwarded to the Dean, who communicates them to the examiners, and upon their approval the candidate is admitted to the final *rigorous* examinations.

The rigorous ordeals for the diploma are two in number. The first is an examination in anatomy, botany, natural history, physiology, general and special pathology of external and internal diseases, semeiology, and general therapeutics. The examiners are the Dean, the President of the Faculty, and the professors of anatomy, botany, natural history, physiology, and pathology.

For the second, the subjects are, chemistry, forensic medicine, ophthalmology, materia medica, art of prescribing, and clinical practice; and the examiners are the professors of chemistry, forensic medicine, ophthalmology, and materia medica, together with a physician unattached to the faculty. In Vienna, the latter person is the vice director, and in the provinces, some practising physician, not a professor.

The candidate may answer, as he pleases, either in Latin or in the vernacular.

Having passed these examinations, he is obliged to write a dissertation on a medical subject. He must also add some theses, which he has to defend publicly against three disputants—doctors of medicine or surgery. The Dean, and the President of the Faculty, as well as four professors, must attend the reading of the dissertation, and copies of it are to be distributed to all who may be present: the said dissertation and theses being written and defended in German, if the Dean grant leave; but this is not very usual, nor without some reasonable pretext.

The expenses of these final *rigorous* examinations are—for the first, thirty-five florins, five florins being paid to each examiner; for the second, sixty-three florins, nine florins to each examiner. The fee to the censorship, exercised by each of the professors in turn, is four florins fifty kreutzers; for the admission, &c. sixty-nine florins; to the president of the dissertation, twenty-seven florins: in all, 199 florins (nearly £20.)

If the candidate seek the diploma of doctor of surgery—1, He must be examined in anatomy, chemistry, materia medica, the art of prescribing, forensic medicine, ophthalmology, and the theory and practice of surgery; 2, He must perform two operations on the dead body publicly, and in presence of all the professional men and pupils who choose to be present. Previously to operating, he must give a history of the process which he is about to adopt, describe it, point out the different modes in which it may be performed, distinguish the several advantages and disadvantages of each mode, note the indication and contra-indication, shew how the instruments and bandages are to be employed, &c.: in short, he must act with all the care and attention he would use with the living.

If a doctor of surgery wish to obtain the degree of doctor of medicine, he must be examined—1, in botany, physiology, natural history, general and special pathology, therapeutics, and semeiology of internal diseases; 2, in practical matters relating to internal medicine. For both these examinations, the dissertation, and the admission fees, &c., the expenses are 114 florins, 30 kr. (about 11*l*. 10*s*.)

If a doctor of medicine wish to be admitted to surgery, he must be examined—1, in the theory and practice of surgery; 2, in the public test required of every candidate for the surgical diploma. The expenses are 110 florins (about 11*l*.)

Non-catholic candidates are admitted to degrees by dispensation only; but then there is no oath administered at variance with the religious tenets or observances of the parties.

### 2. ORGANIZATION OF THE PROFESSION.

We have now to give an account of the arrangements of the medical profession throughout the States. *The supreme direction of every thing that relates to the general organization of medical affairs, is committed to the Chancellory of the court of Austria.* In the provinces, it is entrusted to the provincial officers (*Landesstellen*,) who, however, are obliged to have recourse to the Chancellory in all matters of importance. As all kinds of quarantine regulations, and the appointment of *cordons sanitaires*, rest with the Minister of War, the provincial magistracy have chiefly to attend to the epidemics which may visit their districts. They are enjoined to take all necessary measures to stifle epidemics at their birth, or at least to prevent their spread.

In every province of the hereditary states of Austria there is a medical man, charged with the supreme direction of sanitary arrangements. This is the *Landschafts-Proto-Medicus*, who is also a member of the council of state (*Sanitatsrath*,) with a deliberate voice in the provincial assemblies.

The director of medical studies in the University of Vienna is also the *Proto-Medicus* of the empire. His circle of activity is therefore, as may be conceived, extremely wide, for it comprehends the whole sanitary organization throughout every part of the Austrian monarchy. This officer is second only to the Chancellor, with whom he maintains close relations,—the latter demanding his advice on all arrangements connected with the public health. The appointment of the *Proto-Medici* of the provinces is in the hands of the Emperor; their salary is usually 1000 florins (about 100*l*. per ann.)

Every provincial government has a medical reporter attached to it, whose duty it is to attend at the meetings of the magistracy, to vote on all questions as one of that body, and to assist in the periodical statements required at head quarters, touching—1, the health of the local population and of their domestic animals; 2, the hospitals, their management, and the treatment therein adopted; 3, the apothecaries' shops; and 4, the conduct of the medical men who are in the service of government.

The provincial magistrates have the charge of the public health in their respective localities, and to them the district medical officers direct their reports on all such subjects; for example, as the rise and progress of epidemics, &c. On every occasion of adopting any new sanitory arrangement, they are obliged to take the opinions of the medical faculty of the province.

The district medical officers (*Kreisphysiker*) are appointed by the provincial authorities, with the consent of the *Proto-Medicus* of the province; and finally the government sanctions the appointment, if not otherwise advised.

In those towns which possess a university or a lyceum, the *Proto-Medici* are also directors of medical studies, presidents of the faculty, or the College of Physicians. But Vienna is excepted from this arrangement: there the *Proto-Medicus* of Lower Austria only exercises his jurisdiction beyond the capital. Those universities also are excepted which, like that of Pesth, possess at the same time a Director and a *Proto-Medicus*.

One part of the duties of the *Proto-Medici* is to exercise a political censorship on all works and articles in the journals connected with medicine; the authors are obliged to send their manuscripts to these officers previous to publication. Wherever there are both a *Proto-Medicus* and a *Director* in any city or town, it is the latter who acts as censor.

Among the other functions belonging to the *Proto-Medici* are—1, that of having an eye upon the different orders of practitioners, such as the oculists, dentists, apothecaries and midwives, throughout the province; and, 2, that of superintending the hospitals, asylums, and prisons. Their qualifications for the post must comprehend an exact knowledge of the nature of the country, its inhabitants, and their habits of life—all with reference to the public health. He must offer suggestions to the government from time to time relative to the means of removing or destroying injurious influences; and his special duties embrace the noticing of every thing connected with ill-judged sites for building, the presence of marshes, bad water, the popular prejudices respecting the physical education of children, &c. He must also see that there is a sufficient supply of clever medical practitioners in each district, and that they be not too far asunder. Quacks, and charlatan practitioners of every sort, male and female, who have not duly qualified themselves by passing the proper ordeals, he is authorised to put down; and he must take care that nobody sells drugs except the regular apothecary, and that the latter offer for sale no emmennagogues, violent medicines or poisons, unless when applied for through the recipe of a regular physician or surgeon. He has also to inspect the foundling and maternity hospitals.

On the occurrence of an epidemic, he must repair to the place, and take measures with the district practitioners for its subdual; and when it is over, he must draw up a full report of the circumstances of its rise, progress, nature, symptoms, &c. with such pathological and therapeutical observations as seem to be called for. The *pharmaciens*, and their establishments, are under his strict surveillance; with the injunction, that on the proper discharge of this duty, depends the safety of the subject from the pernicious consequences of bad drugs. When obliged to travel in the performance of his functions, he is paid his expenses and an indemnity. At the end of every year he is bound to send in a report to the government of the province, stating the general sanitory history of the annual period just elapsed: to this he adds a list of the births, marriages, and deaths, and of the numbers received into the hospitals, asylums, &c. with returns of the number cured, or who have died. He appends likewise an account of the atmospheric constitution of the year, and of all the phenomena which seem to affect the health of man and domestic animals: besides all the remarkable cases which have connexion with the province of medicine and surgury. All this is founded on the reports of the subordinate medical officers who have charge of the several districts.

The *Proto-Medicus* of a maritime province is by right a member of the sanitory council of that province, if he reside in the district.

The *Proto-Medicus* of Lower Austria has a most extensive range of duties. Among others, he visits once a month, and without previous notice, all the hospitals within his jurisdiction, including the lunatic asylum, &c.; and the results of his examination are transmitted to government. At the end of every year, he appends to his report a list of all the practitioners within his district, with their names, appointments, and the universities where they studied.

It is a repeated injunction in the ordinances, never to give the appointment of a physician to any one who has not served many years in a large hospital. Recently a law to that effect has been made; and in order to ensure its observance, it is customary, on the occurrence of a vacancy, to advertise it in the Vienna Gazette for several days previous to the final nomination by the court.

It is a strong recommendation to a candidate, that he shall have contributed articles to the "Medical Annals of Austria;" the titles of these articles must be set forth, and if they relate to epidemic or endemic diseases, to remarkable cases in pathology, to medical topography—or contain suggestions for the preservation or amelioration of the public health—they are the more favourably looked upon. The careful and successful practice of viccination, *gratis*, on a great number of poor children, is also a passport to preferment.*

Our readers will hardly fail to be struck with the similarity of the above code, in its leading features, with that which we have often proposed and advocated in this Journal:—namely, the preliminary education—the extent of medical studies—the uniformity of education for physician and surgeon—the rigid examinations—the liberty to practise one or both branches of the profession—and, lastly, the supreme direction of medical polity vested in a central body; or, in other words, ONE FACULTY.

We are extremely gratified to learn that such a system has worked well—that it is not a mad Utopian scheme. engendered in the brains of medical reformers—and—that it has even found favour in the eyes of our contemporary, the MEDICAL GAZETTE.

---

* Med. Gazette, 22d Nov. 1834, as translated from a Belgian Journal.

"If (says our contemporary) certain of our reformers in this country were really desirous of 'levelling upwards,' we could not propose to them a better standard, or model of imitation, than the Austrian system. It seems not unsuited, too, to become their *beau ideal* in another particular, inasmuch as it approaches their grand desideratum of a single faculty; and they find in it, moreover, a metropolitan body conferring degrees in the two great branches of the healing art. *We could ourselves, indeed, be even content with the adoption of some such system among us;* for it exhibits in actual practice that sort of projected alteration of which we have all along been the advocates. All the requisite studies are pursued in the metropolis—all the necessary qualifications, literary and professional, are there attained—and there, too, is (as we would have it) the final verdict of competency pronounced by a competent tribunal."

We were the first to make use of the expression, "levelling upwards"—and after mature reflection, we believe that the expression is as correct and intelligible as "levelling downwards," or any other kind of levelling. We were somewhat roughly handled by our contemporary for advocating any such system; but any soreness that we might have felt at the time, is amply soothed by the above avowal, that our then opponent would now "*be content with the adoption of some such system among us.*" We cannot flatter ourselves that any of *our* arguments worked this change in our contemporary; but we are very glad to find him advocating the same cause, whether induced so to do by the example of the Croat, or by his own reasonings on the subject.

It will not be imputed to us, that we are advocates of despotism, or that we would recommend a censorship of the medical press. But we confess that we should not object to the existence and duties of the PROTO-MEDICI, even in this land of liberty. We would not, indeed, tolerate the supervision of manucripts before they go to press—though we suspect that such supervision might sometimes be useful, and that it sometimes takes place even here. We would not, however, object to some tribunal for the correction of quackish and scurrilous articles, after they are published—as well as for calling to account those individuals who act in an unprofessional manner towards their brethren, or the public at large.

---

## BIBLIOGRAPAICAL RECORD;

OR,

*Works received for Review since last Quarter.*

1. Ossa Humana. Part IV. Three plates, with numerous Figures. Price 5s. By R. B. CUMMING.

2. Practical Hints on the Treatment of several Diseases. By JOHN PEACOCK, M.D. Octavo. pp. 75.

3. The Triumph of Truth & Good Sense; or, an Exposé of Quacks and Quackery. By WILLIAM DE MEY, M.D. &c. Octavo, pp. 30. 1834.

4. Lectures on the ordinary Agents of Life, as applicable to Therapeutics and Hygiene; or the Uses of the Atmosphere, Habitations, Baths, Clothing, Climate, Exercise, Food, Drink, &c. in the Treatment and Prevention of Disease. By ALEX KILGOUR, M.D. Octavo. pp. 359. Ed. Oct. 1834.

☞ *A good compilation interspersed with much original reflection and Observation.*

5. A Compendium of Pharmacy, explanatory of the Chemical Decompositions of the Pharmacopœia Londinensis, illustrated by new and comprehensive Diagrams. By WILLIAM MEADE, M.R.C.S. and Private Teacher of Medicine and Surgury. Small 8vo, pp. 147. Jackson, Oct. 1834. Price 4s

6. On the Anatomy and Diseases of the Neck of the Bladder and of the Urethra; being the Substance of the Lectures delivered in the theatre of the Royal College of Surgeons in the Year 1830; and in the Westminster Hospital in 1833 and 1834. By G. J. Guthrie, F.R.S. Surgeon to the Westminster Hospital, &c. Octavo, pp. 284. Burgess and Hill. Sept. 1834.

---

7. Observations on Functional Affections of the Spinal Cord and Ganglionic System of Nerves, in which their identity with sympathetic, nervous, and simulated Diseases is illustrated. By William Griffin, M.D. one of the Physicians to the Limerick County Infirmary and Lying-in Hospital, &c.; and by Daniel Griffin, M.R.C.S. in London, Surgeon to the Pallas Kenry Dispensary. Octavo, pp. 247. Burgess Hill. October, 1834.

---

8. The Morbid Anatomy of the Eye. By James Wardrop, Surgeon to the late King. Illustrated by coloured Plates. Two volumes, Octavo. Second Edition. Churchill 1834.

---

9. Dentologia: a Poem on the Diseases of the Teeth, and their proper Remedies. By Solymon Brown, A.M. With Notes, practical, historical, illustrative, and explanatory. By Eleazar Parmly, Dentist. Octavo, pp. 176. NewYork. 1834.

---

10. A systematic Treatise on Comparative Physiology, introductory to the Physiology of Man. Translated, with Notes, from the German of Frederick Tiedemann, Professor of Anatomy and Physiology in the Heidelberg University, By James Manby Gully, M.D. and J. Hunter Lane, M.D. &c. Vol. 1. pp. 431. Churchill, London. October, 1834.

☞ *A very valuable Work, which shall be noticed.*

---

11. A Treatise on Diseases of the Chest, and on Mediate Auscultation. From the latest French Edition of M. Laennec, with copious Notes, and a Sketch of the Author's Life. By John Forbes, M.D. &c. Fourth edition, considerably enlarged and improved, with many additional Notes, &c. One volume, octavo, with Plates, pp. 675. Renshaw, 1834.

☞ *This edition is both enlarged and improved. Some of the new notes we shall notice in the Periscope.*

12. An introduction to the Study and Practice of Medicine: comprising a brief Exposition of the various Branches of Medical Knowledge—Direction for their Study, &c. By John Dowson, M.D. Octavo, pp. 96. London, 1834.

☞ *There is much judicious advice in this little work, with references to the best authors for the student to consult.*

---

13. An Essay on Clinical Instruction. By A. C. A. Louis, M.D. Physician to La Pitié, &c. Translated by Peter Martin, M.R.C.S. Octavo, pp. 33. Highley, 1834.

☞ *This little pamphlet is worthy the attention of the pupil entering on attendance at hospitals and dispensaries.*

---

14. The Surgeons Practical Guide in Dressing, and in the Application of Bandages. Illustrated by numerous Engravings. By Thomas Cutler, M.D. late Staff Surgeon in the Belgian Army. Duodecimo. pp. 195, with Plates. Taylor, London, 1834, Price 6s. 6d.

☞ *This is* MULTUM IN PARVO, *and is full of details that cannot be found in any other work.*

---

15. The Elements of Anatomy. By Jones Quain, M.D. Professor of Anatomy and Physiology in the University of London. Octavo, pp. 870. Third Edition, revised and enlarged. Taylor, London, Oct. 1834.

---

16. A popular view of Homœopathy. By the Rev. Thomas Everest, Rector of Weckwar, Gloucestershire. Duodecimo, pp. 95. Pickering, London. Oct. 1834.

☞ *We hope the Reverend Divine does not deal out spiritual consolation to his flock, in the homœopathic doses, which he strenuously recommends physicians to adopt in the administration of medicine to their patients.*

---

17. An Inquiry into the Claims of Dr. William Harvey, to the Discovery of the Circulation of the Blood; with a more equitable Retrospect of that Event; with an Introductory Lecture in Vindication of Hippocrates from the Charge of Ignorance, &c. By John Redman Coxe, M.D. Professor of Materia Medica in the University of Pennsylvania, &c. Octavo, pp. 258. Philadelphia, July, 1834.

---

18. Introductory Lecture to the Medical Classes of the Charing Cross Medical

School. By **William Shearman**, M.D. one of the Physicians to the Hospital. Octavo, pp. 16. October 1st, 1834.

☞ *The objects of the institution and the plans of instruction are clearly stated, and some excellent advice to students is interwoven with other matters.*

---

19. A Manual for Students who are preparing for Examination at Apothecaries' Hall. By **John Steggall**, M.D. Sixth Edition. Small 8vo. pp. 302. Churchill, London, Oct. 1834.

☞ *A sixth edition requires no comment. Some important notes have been added to the present edition, as well as alterations and improvements.*

20. A Treatise on Dropsy, exhibiting its Nature, Causes, Forms, Symptoms, Principles of Treatment, &c. By **James Ford**, MD. Octavo, pp. 57. Oct. 1834.

---

21. A Manual of Aphorisms in Chemistry; the Chemico-pharmaceutical preparations and Decompositions of the London Pharmacopœia, and Toxicology, &c. By **Robert Venables**, M.D. &c. Small 8vo. pp. 251, price 7s. Highley, Fleet-st. 1834.

☞ *A capital manual for Apothecaries' Hall.*

---

22. Principles and Practice of Obstetric Medicine, &c. Parts XXXVI. & XXXVII. By D. D. **Davis**, M.D.

☞ *The Diseases of the female breast are continued in the 36th Fasiculus, and ably treated of. The 37th part takes up the subject of pregnancy.*

---

23. An Inquiry into the Nature and Properties of the Blood, in Health and in Disease. By the late **Charles Turner Thackrah**. A new and enlarged Edition, arranged and revised by **Thos. G. Wright**. M.D. To which is prefixed, a Biographical Memoir of Mr. Thackrah. Octavo, pp. 247. November, 1834.

---

24. The Cyclopædia of Practical Medicine. Part XXIII. Containing Tubercular Phthisis, By Dr. Clarke—Tympanitis, by Dr. Kerr—Morbid States of Urine, by Dr. Bostock—Bloody Urine, by Dr. Goldie—Urticaria, by Dr. Houghton—Pathology of the Uterus, by Dr. Lee—Vaccination, by Dr. Gregory—Diseased Valves of the Heart, by Dr. Hope—Diseases of Veins, by Dr. Lee—Ventilation, by Dr. Brown.

☞ *There are some capital articles in this part.*

---

25. The Principles of Ophthalmic Surgery; being an introduction to a knowledge of the Structure, Functions, and Diseases of the Eye, &c. By **John Walker**, Assistant Surgeon to the Manchester Eye Institution. Small 8vo. pp. 195, price 5s. 6d. Taylor, London, November, 1834.

☞ *This little work presents a very condensed view of the chief points of treatment of ophthalmic complaints. It is a very useful vade-mecum for students attending the ophthalmic institutions.*

---

26. The Gums: with late Discoveries on their Structure, Growth, Connexion, Diseases, and Sympathies. By Mr. **George Waite**, Member of the Royal College of Surgeons, London. Small 8vo. pp. 160. December, 1834.

---

27. A Series of Anatomical Plates, &c. By **Jones Quain**, M.D. Division I. Muscles. Fasciculus XIX. Dec. 1834.

---

28. The Medical Pocket-book for 1835, containing a Case-book and Almanack, with an Account of Medical Corporations, &c. By **John Foote**. Jun. Renshaw, Dec. 1834.

☞ *This pocket-book contains a great deal of useful information for the medical practitioner.*

---

29. Dr. Quain's XX. Fasciculus of Anatomical Plates is just received. As also the 38th part of Dr. Davis's Principles and Practice of Obstetric Medicine.

---

(*In the press.*) A Translation of M. Louis's Researches on Phthisis, with Notes, Additions, and an Introduction. By **Chas. Cowan**, M.D.

---

(*In the press.*) Observations on the Causes and Treatment of Ulcerous Diseases of the leg. By Mr. **J. Spencer**.

---

(*In the press.*) Observations on the Medical Charities of Ireland, with a Plan of a Medical Poor-law for the support of a National System of Infirmaries, Fever-hospitals, and Dispensaries, by which the really Sick-poor in every Parish in the Kingdom can have efficient Medical Aid. By **Denis Phelan**, Esq. of Clonmell. To be published in February next.

## EXTRA-LIMITES.

# THE BATHS OF PFEFFERS.

[IN THE COUNTRY OF THE GRISONS.]

### By JAMES JOHNSON, M. D.

PHYSICIAN EXTRAORDINARY TO THE KING,

&c. &c. &c.

AMONG the strange places into which man has penetrated in search of treasure or health, there is probably not one on this earth, or under it, more wonderful than the Baths of Pfeffers, situated in the country of the Grisons, a few miles distant from the Splugen road, as it leads from Wallenstadt to Coire. They are little known to, and still less frequented by the English; for we could not learn that any of our countrymen had visited them during the Summer of 1834.

Having procured five small and steady horses accustomed to the locality, a party of three ladies and two gentlemen* started from the little town of Ragatz on a beautiful morning in August, and commenced a steep and zig-zag ascent up the mountain, through a forest of majestic pines and other trees. In a quarter of an hour, we heard the roar of a torrent, but could see nothing of itself, or even its bed. The path, however, soon approached the verge of a dark and tremendous ravine, the sides of which were composed of perpendicular rocks several hundred feet high, and at the bottom of which the TAMINA, a rapid mountain torrent, foamed along in its course to the valley of Sargans, there to fall into the upper Rhine. The stream itself, however, was far beyond our view, and was only known by its hollow and distant murmurs. The ascent, for the first three miles, is extremely fatiguing, so that the horses were obliged to take breath every ten minutes. The narrow path, (for it is only a kind of mule-track,) often winded along the very brink of the precipice, on our left, yet the eye could not penetrate to the bottom of the abyss. After more than an hour of toilsome climbing, we emerged from the wood, and found ourselves in one of the most picturesque and romantic spots that can well be imagined. The road now meanders horizontally through a high, but cultivated region, towards the village of Valentz, through fields, gardens, vineyards, and meadows, studded with chaumiers and chalets, perched fantastically on projecting ledges of rock, or sheltered from the winds by tall and verdant pines. The prospect from Valentz, or rather from above the village, is one of the most beautiful and splendid I have any where seen in Switzerland. We are there at a sufficient distance from the horrid ravine, to contemplate it without terror, and listen to the roaring torrent, thundering unseen, along its rugged and precipitous bed. Beyond the ravine we see the monastery and village of Pfeffers, perched on a high and apparently inaccessible promontory, over which rise alpine mountains, their sides covered with woods, their summits with snow, and their gorges glittering with glaciers. But it is towards the East that the prospect is most magnificent and varied. The eye ranges, with equal pleasure and astonishment, over the valley of Sargans, through which rolls the infant Rhine, and beyond which the majestic ranges of the Rhetiken Alps, ten thousand feet high, rise one over the other, till their summits mingle with the clouds. Among these ranges the SCENA-PLANA, the ANGSIENBERG, the FLESCH, (like a gigantic pyramid,) and in the distance the Alps that tower round Feldkirck are the most prominent features. During our journey to the Baths, the morning sun played on the snowy summits of the distant mountains, and marked their forms on the blue expanse behind them, in the most distinct outlines. But, on our return, in the afternoon, when the fleecy clouds had assembled, in fantastic groups, along the lofty barrier, the reflections and refractions of the solar beams threw a splendid crown of glory round the icy heads of the Rhetian Alps—changing that "cold sublimity" with which the morning atmosphere had invested them, into a glow of illumination which no pen or pencil could portray. To enjoy the widest possible range of this matchless prospect, the tourist must climb the peaks that overhang the village, when his eye may wander over the whole of the Grison Alps and valleys, even to the lake of Constance.

---

* Mr. and Miss Hayward, Mrs. and Miss Johnson, and myself.

From Valentz we turned abruptly down towards the ravine, at the very bottom of which are the BATHS of PFEFFERS. The descent is by a series of acute and precipitous tourniquets, requiring great caution, as the horses themselves could hardly keep on their legs, even when eased of their riders. At length we found ourselves in the area of a vast edifice, resembling an overgrown factory, with a thousand windows, and six or seven stories high. It is built on a ledge of rock that lies on the left bank of the TAMINA torrent, which chafes along its foundation. The precipice on the opposite side of the Tamina, and distant about fifty paces from the mansion or rather hospital, rises five or six hundred feet, as perpendicular as a wall, keeping the edifice in perpetual shade, except for a few hours in the middle of the day. The left bank of the ravine, on which the hospital stands, is less precipitous, as it admits of a zig-zag path to and from the Baths. The locale, altogether, of such an establishment, at the very bottom of a frightful ravine, and for ever chafed by a roaring torrent, is the most singularly wild and picturesque I had ever beheld; but the wonders of Pfeffers are not yet even glanced at.

From the western extremity of this vast asylum of invalids, a narrow wooden bridge spans the Tamina, and by it we gain footing on a small platform of rock on the opposite side. Here a remarkable phenomenon presents itself. The deep ravine, which had hitherto preserved a width of some 150 feet, contracts, all at once, into a narrow cleft or crevasse, of less than 20 feet, whose marble sides shoot up from the bed of the torrent, to a height of four or five hundred feet, not merely perpendicular, but actually inclining towards each other, so that, at their summits, they almost touch, thus leaving a narrow fissure through which a faint glimmering of light descends, and just serves to render objects visible within this gloomy cavern. Out of this recess the Tamina darts in a sheet of foam, and with a deafening noise reverberated from the rocks within and without the crevasse. On approaching the entrance, the eye penetrates along a majestic vista of marble walls in close approximation, and terminating in obscurity, with a narrow waving line of sky above, and a roaring torrent below! Along the southern wall of this sombre gorge, a fragile scaffold, of only two planks in breadth, is seen to run, suspended—as it were—in air, fifty feet above the torrent, and three or four hundred feet beneath the crevice that admits air and light from Heaven into the profound abyss. This frail and frightful foot-path is continued (will it be believed?) nearly *half a mile* into the marble womb of the mountain! Its construction must have been a work of great difficulty and peril; for its transit cannot be made even by the most curious and adventurous travellers, without fear and trembling, amounting often to a sense of shuddering and horror. Along these two planks we crept or crawled, with faltering steps and palpitating hearts. It has been my fortune to visit most of the wonderful localities of this globe, but an equal to this I never beheld.

"Imagination, (says an intelligent traveller,) the most vivid, could not portray the portals of Tartarus under forms more hideous than those which Nature has displayed in this place. We enter this gorge on a bridge of planks (pont de planches) sustained by wedges driven into the rocks. It takes a quarter of an hour or more to traverse this bridge, and it requires the utmost precaution. It is suspended over the Tamina, which is heard rolling furiously at a great depth beneath. The walls of this cavern, twisted, torn, and split (les parois laterales contournée, fendues, et dechirées) in various ways, rise perpendicular, and even incline towards each other, in the form of a dome; whilst the faint light that enters from the portal at the end, and the crevice above, diminishes as we proceed;—the cold and humidity augmenting the horror produced by the scene. The fragments of rock sometimes overhang this gangway in such a manner, that the passenger cannot walk upright:—At others, the marble wall recedes so much, that he is unable to lean against it for support. The scaffold is narrow, often slippery; and sometimes there is but a single plank, separating us from the black abyss of the Tamina.* He who has cool courage, a steady eye, and a firm step, ought to attempt this formidable excursion (épouvantable excursion) in clear and dry weather, lest he should find the planks wet and slippery. He should start in the middle of the day, with a slow and measured step, and without a stick. The safest plan is to have two guides supporting a pole, on the inside of which the stranger is to walk."

We neglected this precaution, and four out of the five pushed on, even without a guide at all. At forty or fifty paces from the entrance the gloom increases, while the roar of the torrent beneath, reverberated from the sides of the cavern, augments the sense of danger and the horror of the scene. The meridian sun penetrated sufficiently through the narrow line of fissure at the summit of the dome, to throw a variety of lights and of shadows over the vast masses of variegated marble composing the walls of this stupendous cavern, compared with which, those of Salsette, Elephanta, and even Staffa, shrink into insignificance. A wooden pipe, which conveys the hot waters from their source to the baths, runs along in the angle between the scaffold and the rocks, and proves very serviceable, both as a support for one hand while pacing the plank, and as a seat, when the passenger wishes to rest, and contemplate the wonders of the cavern. At about one-third of the distance inward, I would advise the tourist to halt, and survey the singular locality in which he is placed. The inequality of breadth in the long chink that divides the dome above, admits the light in very different proportions, and presents objects in a variety of aspects. The first impression which occupies the mind is caused by the cavern itself, with reflection on the portentous convulsion of Nature which split the marble rock in twain, and opened a gigantic aqueduct for the mountain torrent.* After a few minutes' rumination on the action of subterranean fire, our attention is attracted to the slow but powerful operation of water on the solid parietes of this infernal grotto. We plainly perceive that the boisterous torrent has, in the course of time, and especially when swelled by rains, caused wonderful changes both in its bed and its banks. I would direct the attention of the traveller to a remarkable excavation formed by the waters on the opposite side of the chasm, and in a part more sombre than usual, in consequence of a bridge that spans the crevice above, and leads to the Convent of Pfeffers. This natural grotto is hollowed out of the marble rock to the depth of 30 feet, being nearly 40 feet in width, by 26 feet in height. It is difficult not to attribute it to art; and, as the whole cavern constantly reminds us of the Tartarean Regions, this beautifully vaulted grotto seems to be fitted for the throne of Pluto and Proserpine—or, perhaps, for the tribunal of Rhadamanthus and his brothers of the Bench, while passing sentence on the ghosts that glide down this Acheron or Cocytus—for had the TAMINA been known to the ancient poets, it would assuredly have been ranked as one of the rivers of Hell.

---

* "Le pont est etroit, souvent glissant, et quelquefois on n'est separé que par une seule planche du noir abîme de la TAMINA."

One of the most startling phenomena, however, results from a perspective view into the cavern, when about midway, or rather less, from its portal. The rocky vista ends in obscurity; but gleams and columns of light burst down, in many places, from the meridian sun, through this "palpable obscure," so as to produce a wonderful variety of light and shade, as well as of bas-relief, along the fractured walls. While sitting on the rude wooden conduit before alluded to, and meditating on the infernal region upon which I had entered, I was surprised to behold, at a great distance, the figures of human beings, or thin shadows (for I could not tell which), advancing slowly towards me—suspended between Heaven and earth—or, at least, between the vault of the cavern and the torrent of the Tamina, without any apparent pathway to sustain their steps, but seemingly treading in air, like disembodied spirits! While my attention was riveted on these figures, they suddenly disappeared; and the first impression on my mind was, that they had fallen and perished in the horrible abyss beneath. The painful sensation was soon relieved by the reappearance of the personages in more distinct shapes, and evidently composed of flesh and blood. Again they vanished from my sight; and, to my no small astonishment, I beheld their ghosts or their shadows advancing along the opposite side of the cavern! These, and many other optical illusions, were caused, of course, by the peculiar nature of the locality, and the unequal manner in which the light penetrated from above into this sombre chasm.

---

* It is surprising that the author of the "Voyage Pittoresque en Suisse," and even Dr. Ebell, should have been led into the monstrous error of imagining that the torrent of the Tamina had, in the course of ages, hollowed out of the marble rock this profound bed for itsetf. We might just as well suppose, that the bed of the Mediterranean had been scooped out by the waters of the Hellespont, in their way from the Black Sea to the Atlantic. The mountain was rent by some convulsion of Nature, and apparently from below upwards, as the breadth, at the bed of the Termina, is far broader than the external crevice above.

Surprise was frequently turned into a sense of danger, when the parties, advancing and retreating, met on this narrow scaffold. The "laws of the road" being different on the Continent from those in Old England, my plan was to screw myself up into the smallest compass, close to the rock, and thus allow passengers to steal by without opposition. We found that comparatively few penetrated to the extremity of the cavern and the source of the Thermæ—the majority being frightened, or finding themselves incapable of bearing the sight of the rapid torrent under their feet, without any solid security against precipitation into the infernal gulf. To the honour of the English ladies, I must say that they explored the source of the waters with the most undaunted courage, and without entertaining a thought of returning from a half-finished tour to the regions below.*

Advancing still farther into the cavern, another phenomenon presented itself, for which we were unable to account at first. Every now and then we observed a gush of vapour or smoke (we could not tell which) issue from the further extremity of the rock on the left, spreading itself over the walls of the cavern, and ascending towards the crevice in the dome. It looked like an explosion of steam; but the roar of the torrent would have prevented us from hearing any noise, if such had occurred. We soon found, however, that it was occasioned by the rush of vapour from the cavern in which the thermal source is situated, every time the door was opened for the ingress or egress of visitors to and from this natural vapour-bath. At such moments the whole scene is so truly Tartarean, that had Virgil and Danté been acquainted with it, they need not have strained their imaginations in portraying the ideal abodes of fallen angels, infernal gods, and departed spirits, but painted a HADES from Nature, with all the advantage of truth and reality in its favour.

Our ingress occupied nearly half an hour, when we found ourselves at the extremity of the parapet, on a jutting ledge of rock, and where the cavern assumed an unusually sombre complexion, in consequence of the cliffs actually uniting, or nearly so, at the summit of the dome. Here, too, the TAMINA struggled, roared, and foamed through the narrow, dark, and rugged gorge with tremendous impetuosity and deafening noise, the sounds being echoed and reverberated a thousand times by the fractured angles and projections of the cavern. We were now at the source of the THERMÆ. Ascending some steps cut out of the rock, we came to a door, which opened, and instantly enveloped us in tepid steam. We entered a grotto in the solid marble, but of what dimensions we could form no estimate, since it was dark as midnight, and full of dense and fervid vapour. We were quickly in an universal perspiration. The guides hurried us forward into another grotto, still deeper in the rock, where the steam was suffocating, and where we exuded at every pore. It was as dark as pitch. An owl would not have been able to see an eagle within a foot of its saucer eyes. We were told to stoop and stretch out our hands. We did so and immersed them in the boiling—or, at least, the gurgling, source of the Pfeffers. We even quaffed at this fountain of Hygeia.

---

* This has not always been the case. The talented authoress of "Reminiscences of the Rhine," &c. appears to have lacked courage for this enterprise, though her beautiful daughters advanced to the farther extremity of the gorge.

Often had we slept in damp linen, while travelling through Holland, Germany, and Switzerland. We had now, by way of variety, a waking set of teguments saturated with moisture *ab interno,* as well as *ab externo,* to such an extent, that I believe each of us would have weighed at least half a stone more at our exit than on our entrance into this stew-pan of the Grison Alps.

On emerging into the damp, gellid, and gloomy atmosphere of the cavern, every thing appeared of a dazzling brightness after our short immersion in the Cimmerian darkness of the grotto. The transition of the temperature was equally as abrupt as that of light. The vicissitudes could have been little less than 50 or 60 degrees of Fahrenheit in one instant, with all the disadvantage of dripping garments! It was like shifting the scene, with more than theatrical celerity, from the Black Hole of Calcutta to Fury Beach, or the snows of Nova Zembla. Some of the party, less experienced in the effects of travelling than myself, considered themselves destined to illustrate the well-known allegory of the discontented—and that they would inevitably carry away with them a large cargo of that which thousands come here annually to get rid of—Rheumatism. I confess that I was not without some misgivings myself on this point, seeing that we had neither the means of changing our clothes nor of drying them—except by the heat of our bodies in the mountain breeze. The Goddess of health, however, who is nearly related to the Genius of Travelling, preserved us from all the bad consequences, thermometrical and hygrometical, of these abrupt vicissitudes.*

We retrograded along the narrow plank that suspended us over the profound abyss with caution, fear, and astonishment. The TAMINA seemed to roar more loud and savage beneath us, as if incensed at our safe retreat. The sun had passed the meridian, and the gorge had assumed a far more lugbrious aspect than it wore on our entrance. The shivered rocks and splintered pinnacles that rose on each side of the torrent, in gothic arches of altitude sublime, seemed to frown on our retreating footsteps—while the human figures that moved at a distance along the crazy plank, before and behind us, frequently lost their just proportions, and assumed the most grotesque and extraordinary shapes and dimensions, according to the degree of light admitted by the narrow fissure above, and the scarcely discernible aperture at the extremity of this wonderful gorge. The TAMINA, meanwhile, did not fail to play its part in the gorgeous scene—astonishing the eye by the rapidity of its movements, and astounding the ear by the vibrations of its echoes. It seemed to growl more furiously as we receded from the depths of the crevasse.

At length we gained the portal, and, as the sun was still darting his bright rays into the deepest recesses of the ravine, glancing from the marble rock, and glittering on the boiling torrent, the sudden transition from Cimmerian gloom to dazzling day-light, appeared like enchantment. While crossing the trembling bridge, I looked back on a scene which never can be eradicated from my memory. It is the most singular and impressive I have ever beheld on this globe, and compared with which, the BRUNNENS are "bubbles" indeed!†

---

* This circumstance illustrates, in a very remarkable manner, the effects of passing from a hot, or vapour-bath, into cold air or water. The immunity is nearly certain. The hotter the medium from which we start into the cold, the less danger there is of suffering any inconvenience. This principle in Hygiene is more understood than practised. It will be adverted to farther on.

† Lest I should be suspected of exaggeration, in this account of the Baths of

While examining the waters, the baths, and the internal economy of the vast VALETUDINARIUM that stands in this savage locality, the bell announced the approach of the second, or superior dinner, which happened that day to be rather later than usual. The SALON, overlooking the torrent of the Tamina, was soon replenished with guests of the better order; the canaille, or swarm of inferior invalids having dined two hours or more previously, in the common SALLE A MANGER. It needed but little professional discrimination to class and specify them. The majority proclaimed the causes of their visits to the Pfeffers. Rheumatism, scrofula, and cutaneous diseases, formed the prominent features in this motley assemblage. Invalids, with chronic complaints, real or imaginary, such as abound at all watering-places, foreign and domestic, were mingled in the group; while a small portion, including our own party, evinced any thing but corporeal ailments—unless a "CANINE APPETITE," at a genuine German *table d'hôte* may be ranked among the evils to which English flesh is heir.—Some monks, from the neighbouring monastery, (to which the Baths belong,) took rank, and indeed precedence, in this small division. The mountain breeze and fervid sun of the Convent of Pfeffers had

---

Pfeffers, I shall here introduce a short extract from "REMINISCENCES OF THE RHINE, &c." by Mrs. Boddington—a work eulogized to the skies in the Edinburgh Review, and its author represented (and, I understand, deservedly) as a lady of very superior talents and of srtict veracity. After some slight notice of the Bath-house, Mrs. B. proceeds thus:—

"Behind rolls the stormy Tamina, hemmed in at one side by the dark Bath-house and the impending cliffs, while, on the other, a giant wall of perpendicular rock, starting up daringly, and shutting out the world—almost the light of Heaven—close up the scene. Our guide proposed that we should visit the mineral springs that boil up from the depth of an awful cavern, several hundred paces from the Bath-house. A bridge, thrown from rock to rock, crosses the flood, and a narrow ledge of planks, fixed, I know not how, against the side of the rock, and suspended over the fierce torrent, leads through a long dark chasm to the source. I ventured but a litttle way; for, when I found myself on the terrifying shelf, without the slightest ballustrade, and felt it slippery, from the continual spray, and saw nothing between us and the yawning gulf to which darkness, thickening at every step, gave increased horror, I made a few rapid reflections on foolhardiness, and retreated."

bronzed them with much of that nut-brown complexion, which travelling exercise in the open air had conferred on their British visiters; while their sleek cheeks, and portly corporations proved, almost to a demonstration, that the holy fathers descended into the profound ravine of the Tamina to give their benediction to the waters, rather than to drink them—and to add a sacred zest to the viands of the REFECTORY, by the alacrity with which they swallowed them. Their appearance illustrated the truth of the adage—"What will not poison will fatten."

Among the "miseries of human life" might be ranked that of dining, or rather starving, at a German TABLE D'HÔTE—and that, too, in the midst of plenty! It is in such a place that the paradox is explained—inopem me copia fecit." Sir F. Head has remarked that "the dish that is not acid is sure to be oily." If this were all, we should have small reason to complain. The misfortune is, that not only oils and acids are liberally distributed among his messes, by that infernal agent, the MAITRE DE CUISINE, but every loathsome ingredient that the three kingdoms of Nature can furnish, is crammed into every pot and saucepan in his subterranean dominion. Some philosophers have endeavovred to distinguish man from other animals, and elevate him on the scale of created beings, on account of his *cooking* propensities. I think they entitle him to an additional seven years in PURGATORY, if there be such a place, as our Catholic brethren affirm there is! One thing is clear, however,—that he is punished here below for the crimes which he commits against Nature, by "torturing dishes from their native taste," and mingling all unutterable things in that box of Pando—his accursed culinary cauldron!

The succession is not less abhorrent to the English palate than the composition of continental dishes. It is generally believed that animal and vegetable food is designed to be eaten together; otherwise Nature would have furnished one side of the mouth with incisors and the other with grinders. In the "continental system" they take a very different view of things. When the vegetables (rather less than half-boiled, and swimming in oil) are on the table, there is no animal food—none, at least, that has not undergone more transubstantiations than Vishnou, and more metamorphoses than are recorded by Ovid. When meat smokes on the board, the vegetables have disappeared! The animal that was browsing or bleating on the mountains, the preceding day, and slaughtered in the night, is burnt to a cinder, or boiled till little more than bones and sinews are left:—In either case, it is some degrees harder and tougher than well tanned sole-leather. As for poor chanticleer, his ablation from the roost—decapitation in the court-yard—auto da fé in the kitchen—dissection in the salle à manger—and sepulture in some dark recess of a German stomach, occupy about three quarters of an hour—the five acts of the tragedy being often enacted *after* the soup has gone its round of the table d'hôte! If the uninitiated Briton sometimes screws his courage up to make an attack on one of those petty fortresses of filth, called "MADE DISHES"—or if he endeavours to stifle the cravings of Nature on sour bread, sour krout, or sour wine, he stands a fair chance to be visited with colic, if not cholera, before the day is over. Placed thus between Scylla and Charybdis- -between the tortures of hunger and the terrors of poison, an OASIS in the desert does sometimes greet his eye—a good substantial dish of capon, veal, or mutton. By an instinctive impulse, he brandishes his couteau, or solicits to be *helped* by a brother guest. But the fate of Tantalus is his doom. Just as the prize appears to be within his grasp, it vanishes, with as much celerity as the dishes of poor Sancho did by the conjurors's wand, in the Island of Barataria! The malicious waiter, aware of John Bull's propensities, never takes his eye from the savoury viand till he snatches it off the table, for dissection at the side-board! It is two to one that John Bull never tastes the desired fare. It is handed round to every one, before the *disjecta membra* reach him—if they ever do reach him, which is very problematical! Many a time have I seized the dish at the same moment with the waiter, and captured the prize by an unequivocal threat to chop off two or three of his fingers with my knife, if he persisted in his unhallowed "ABDUCTION."

Long experience has taught me, that the best plan for an Englishman, whose stomach does not measure three feet in circumference, and who does not possess some secret antidote against all kinds of poisons, is to secure his place at the TABLE D'HÔTE, and, when the soup comes in, to take a walk of full an hour round the town, and then come back to his place—when he may probably find a dish of some kind of animal food, biped or quadruped, with sour bread, on which he may dine. The "vin ordinaire" is, of course, ordinary destruction to all stomachs which have not capacity for a pint of oil to qualify a quart of acid.

The foregoing sketch is not drawn from the ordinary of the Pfeffers—where, indeed, we had better fare than many places of higher pretensions—but will apply very generally to the Continent. I am well aware that great numbers of my countrymen have become *acclimaté* (if I may use the expression) to foreign cookery—or, more properly speaking *denaturalized*, as to every thing which they put into their stomachs. By such folks I have been often asked—"how it is that the people of the Continent live and thrive on the provender which you condemn?" My answer has been very short—and I have never received a satisfactory rejoinder. They do *not* live and thrive on the cookery which they use. On the contrary, they wither and die on it. The bills of mortality, in the most favoured parts of the Continent, as compared with the same gloomy registers in England, prove, beyond contradiction, the shorter range of existence enjoyed by the inhabitants of the former, notwithstanding their advantages in respect of climate :—while the unhealthy aspects, the stunted growth, and the large proportion of deformities, that meet the eye and attract the notice of English travellers in every part of Europe, attest the deleterious agency of some general cause on the human frame. As that agency can hardly be sought either wholly, or even principally, in the climate, the soil, the air, or the water, (excepting, of course, certain malarious and goitrous localities in Italy and the Alps,) we have fair reason to attribute much of the curtailment of life and deterioration of health to the denaturalization of their food by complicated cookery—to their inordinate addiction to tobacco—to malpropre habits—and to the quality of their drink. If oily, acid, "or rancid dishes, elaborated "de omnibus rebus et *quibusdem aliis*,"—half-boiled vegetables—meat just killed and then cinderized—with sour wine, be wholesome and nutritious, then the people of the Continent ought to live to the age of the Antediluvians.

Another fallacious argument has been adduced in favour of continental cookery and continental habits: namely, that the English enjoy good health while travelling, or even sojourning there. This may be true to the full extent, without invalidating the arguments adduced above. The English owe this improvement of health to climate, to change of air and scene, to the exercise of travelling, to earlier hours than they kept at home—and perhaps, in some degree, to the excitement resulting from novelty, and intercourse with strangers. I maintain that their health is neither improved nor sustained by the adoption of continental habits in eating, drinking, smoking, and some others which I shall not describe.

# THE

# WATERS OF PFEFFERS.

THE Waters of PFEFFERS have neither taste, smell, nor colour. They will keep for ten years, without depositing a sediment, or losing their transparency. But we are not to infer that they are destitute of medicinal powers, because they possess no sensible properties. In their chemical composition, they have hitherto shown but few ingredients; and those of the simpler saline substances, common to most mineral springs.* It does not follow however, that they contain no active minerals because chemistry is not able to detect them. Powerful agents may be diffused in waters, and which are incapable of analysis, or destructible by the process employed for that purpose. The only sure test is EXPERIENCE of their effects on the human body. It is not probable that the Baths of Pfeffers would have attracted such multitudes of invalids, annually, from Switzerland, Germany, and Italy; and that for six centuries, if their remedial agency had been null or imaginary.† Their visiters are not of that fashionable class, who run to watering-places for pleasure rather than for health—or, to dispel the vapours of the town by the pure air of the coast or the country. Yet, as human nature is essentially the same in all ranks of society, I have no doubt that much of the fame acquired by the Baths of Pfeffers, has been owing to the auxiliary influence of air, locality, change of scene, moral impressions, and the peculiar mode of using the waters. Their temperature—100° of Fahren.—certain physical phenomena which they evince, and the nature of the diseases which they are reported to cure, leave little doubt in my mind that their merits, though overrated, like those of all other mineral springs, are very considerable.

---

* In an old account of the baths we find the following passage:—The water of these baths is extremely clear, without taste or smell. It bears with it the most subtle spirits of sulphur, nitre, vitriol, and divers metals—amongst others, GOLD."

† In many people they produce slight vertigo—in more, they act freely on the bowels. They were discovered in the 12th century, by two chasseurs from the neighbouring monastery, who were seeking birds' nests in the ravine of the

The disorders for which they are most celebrated, are rheumatic and neuralgic pains, glandular swellings, and cutaneous eruptions. But they are also resorted to by a host of invalids afflicted with those anomalous and chronic affections, to which nosology has assigned no name, and for which the Pharmacopœia affords very few remedies. As the Baths belong to the neighbouring Convent of Pfeffers, and, as the holy fathers afford not only spiritual consolation to the patients, but medical assistance in directing the means of cure, there is every reason to believe, or, at least, to hope, that the moral, or rather divine influence of Religion co-operates with mere physical agency, in removing disease and restoring health.

The Waters of Pfeffers are led from their sombre source in the cavern, along the narrow scaffold before described, into a series of Baths scooped out of the rocky foundation of this vast hospital, each bath capable of accommodating a considerable number of people at the same time. The thermal waters are constantly running into and out of the baths—or rather through them, so that the temperature is preserved uniform, and the waters themselves in a state of comparative purity, notwithstanding the numbers immersed in them. The Baths are arched with stone—the window to each is small, admitting little light, and less air:—and, as the doors are kept shut, except when the bathers are entering or retiring, the whole space not occupied by water, is full of a dense vapour, as hot as the Thermæ themselves. The very walls of the baths are warm, and always dripping with moisture. Such are the SUDATORIA in which the German, Swiss, and Italian invalids indulge more luxuriously than ever did the Romans in the Baths of Caracalla. In these they lie daily, from two, to six, eight, ten—and sometimes sixteen hours!* The whole exterior of the body is thus soaked, softened—parboiled; while the interior is drenched by large quantities swallowed by the mouth—the patient, all this while, breathing the dense vapour that hovers over the baths. The Waters of Pfeffers, therefore, inhaled and imbibed,

---

Tamina. For a long time they could only descend to these baths by means of ropes; but at length human ingenuity formed zig-zags along the rocks. As if every thing relating to these waters should partake of the wonderful, it may be mentioned that they begin to flow in May, when the Summer is approaching—are at their acmé when the skies are fervid and the land parched with thirst, yielding 1500 pints of water every minute—and cease entirely in September, when the rains begin to fall, and the mountain streams to pour freely along every declivity!

* A German writer informs us that the country people stay in these Baths from

exhaled and absorbed, for so many hours daily, must permeate every vessel, penetrate every gland, and percolate through every pore of the body. So singular a process of human maceration in one of Nature's caldrons, conducted with German patience and German enthusiasm, must, I think, relax many a rigid muscle—unbend many a contracted joint—soothe many an aching nerve—clear many an unsightly surface—resolve many an indurated gland—open many an obstructed passage—and restore many a suspended function. The fervid and detergent streams of the Pfeffers, in fact, are actually turned, daily and hourly, through the Augean stable of the human constitution, and made to rout out a host of maladies indomitable by the prescriptions of the most sage physicians. The fable of MEDEA'S revival of youthful vigour in wasted limbs is very nearly realized in the mountains of the Grisons, and in the savage ravine of the TAMINA. Lepers are here purified—the lame commit their crutches to the flames—the tumid throat and scrofulous neck are reduced to symmetrical dimensions—and sleep revisits the victim of rheumatic pains and neuralgic tortures.

That many circumstances, connected with the singular locality of the Pfeffers, conduce to their medicinal reputation, there can be little doubt. The Baths themselves, though at the bottom of a ravine, nearly a thousand feet deep, are yet at a considerable height above the neighbouring valley, and very far above the level of the ocean. The air feels peculiarly light and pure, even in the depth of the gorge; while the surrounding precipices and lofty mountains must preserve a remarkable equilibrium of temperature. The sun can penetrate the profundity of the ravine only during a few hours in the middle of the day; and, the sojourners can easily defend themselves from his rays within the wall of this vast sudatorium—or in the cool and gloomy cavern itself. The tempest may roll, the thunders may roar, and the lightnings may play round the lofty alpine peaks; but the profound depth of the ravine maintains its sombre serenity of atmosphere unchanged, and the whole locality looks like a little colony that had sunk from the surface of the upper world, and was only reminded of its existence by the distant war of the elements.

When rains descend into the ravine, the valetudinarians have ample space for exercise under the arcades of the building, or in its spacious "*salles a manger*." When the weather is fine, there is a terrace in the open air, cut out of the rock close to the Baths, for such as are incapable of much exer-

---

Saturday night till Monday morning. "Tous les Samedis on voit accourir à Pfeffers une multitude de gens des campagne voisines, et ils restent dans le bains jusqu'au Lundi matin pour provoquer la seur."

tion. To those, however, who are able to scale the neighbouring heights, is opened a fund of pleasure and health, such as no place that I have visited on the face of this globe, can present. On the right bank of the Tamina, a staircase is hewn out of the solid marble, by which you ascend to a beautiful little plateau, on which is built the convent, as well as the village of Pfeffers. This table-land is in the form of a triangle, two sides of which are almost perpendicular precipices of nearly a thousand feet—one overhanging the Tamina—the other overlooking the valley of Sargans, through which meanders the upper Rhine. The third side connects this elevated plain with one of the most celebrated Alps of the Grisons—the GALANDA. The monks, in all ages, have evinced their taste in the selection of healthy as well as beautiful sites for their monasteries and convents. The plateau of Pfeffers is most delightfully situated, under the shelter of the GALANDA and other mountains in its rear, and with the romantic valley of Sargans beneath it in front. The ascent to the summit, or *Belvidere of the Galanda*, on this side of the ravine, is a work of labour; but the lover of magnificent scenery would be repaid by one of the most splendid prospects in the world, while the hypochondriacal invalid would, most assuredly, throw off his load of "blue devils," and imaginary ills, before he got half way to the apex of this gigantic pyramid. The chain of the Rhetian Alps rises like a wall before him—the lake of Wallenstadt, with its stupendous and impending scenery, is under his feet—the lake of Constance is in the distance—and a sea of Alps encompasses him on every side.

Invalids of weaker powers, and less *ambitious views*, may mount, almost entirely on mules or small horses, from the western bank of the Tamina—namely from the Baths, by the romantic village of Valenz, to the mountains that tower over the hamlet, where they will enjoy a prospect little inferior to that which is seen from the GALANDA, and where the sublime and beautiful are scattered in the most bountiful profusion.*

If we consider attentively the remarkable process of bathing, already described—the equable temperature maintained in the ravine—the moral impressions made on the mind of the stranger by the stupendous and romantic scenes around him—the opportunities, and even the inducements, for every species of exercise, from the slow saunter on the level terrace, to the laborious ascent of the cloud-capt Alp—and, lastly, the invigorating influence of the mountain breeze, after protracted immersion in hot water, and long inhalation of tepid vapour—we can scarcely doubt that all these moral and physical agencies combined, must produce very remarkable effects on the human constitution—and those of a very beneficial kind, particularly in certain maladies.

---

* It is equally curious and interesting to observe the series of gradations and changes that present themselves to the eye of the spectator, while standing on an eminence of five or six thousand feet, and in the vicinity of the high Alps. First, the cap of dazzling and unsullied snow, crowning each mountain-top 'in frigid majesty:'—then the naked and primœval granite, starting out through the thinner coats

It is clear, however, that there are many complaints to which the Baths of PFEFFERS might prove injurious. In pulmonary affections of all kinds, warm baths are more than doubtful—they are generally prejudicial. The afflux of blood to the surface, while in the bath, must be followed by more or less of efflux from the periphery to the centre of the body—and then the weak organ will experience more injury than benefit from the operation. Besides this, there is a certain degree of re-action that follows all baths, both hot and cold—and this re-action or excitement almost always aggravates the symptoms of chronic inflammation, or organic disease of internal structures.

---

of snow—a little lower down we see specks of scanty vegetation, preserving a miserable and precarious existence amidst storms and avalanches—then the stunted pine, extracting nutriment from the crevices of the rocks—next in succession, we see small pieces of pasturage, maintaining the goat, with its outlaw, the chamois, and presenting the first and worst of human habitations—the CHALET. Descending still lower, the dark "piney forest" contrasts deeply with the masses of "unfathom'd snows" that hang over it, and seems to stand as the barrier between the region of desolation and that of fertility. Now, the CHAUMIERES or Swiss cottages supersede the chalets, or goatherd's huts, perched on ledges of rocks, and surrounded by meadows, corn-fields, gardens, and even vineyards;—with cattle grazing, shepherds tending their flocks, and peasants labouring in every kind of rural avocation. From the region of eternal snow, down to the sunny vales of the Alps, we see the glittering glaciers wedged in the deep ravines, and slowly descending in rivers of solid ice, each disgorging from its dark recesses a rapid and roaring torrent, the noisy herald of the ALPS, announcing their contributions to the mighty ocean. Lastly, the eye rests on the tranquil and glassy lake, the mirror of the mountains, reflecting from its polished surface the hoary peak and frowning cliff—the verdant field and gloomy forest—the solitary hut and smiling cottage—the foaming cataract and fearful precipice—all the materials and features, in short of the magnificent amphitheatre. The contemplative spectator beholds, with equal delight and astonishment, another Heaven and another Earth depicted ten thousand feet beneath him, illustrating, and infinitely surpassing, the beautiful description of the poet—PRIOR :—

"As when some smooth expanse receives, impressed,
Calm Nature's image on its wat'ry breast ;—
Down bend the banks, the trees depending grow,
And skies beneath, with answering colours glow."

Chronic hepatitis may form an exception sometimes. The excitement of the *tepid* bath on the skin generally increases the secretion of bile, and in that way relieves a congested liver. But, even here, the bath should never be more than tepid.

The same observations apply to all organic affections of the heart. The tide of the circulation, in such cases, should never be accelerated by either warm or cold bathing—or by the exercise of climbing heights, in such localities as the PFEFFERS. I have seen, in my wanderings on the Continent, many invalids incautiously sent to drink and bathe in various medicinal waters, and where injury would almost inevitably be the result.

In determinations (as they are called) to the head—in chronic affections of the membranes, of the vessels, or of the substance of the brain, hot or cold baths are decidedly contra-indicated, and for the reasons already adduced.

As people with acute diseases are never sent to such places as these, it may seem unnecessary to allude to them here; but I cannot help taking this opportunity of cautioning against a practice by no means uncommon in this country—namely, the employment of warm, and even hot, baths in acute rheumatism. I can safely declare that I never yet saw any good effects from such procedure;—but, on the contrary, that I have very generally observed an augmentation of the fever—or, what is worse, an increased tendency to translation—not merely from joint to joint, but from the surface to some internal organ, especially the heart. I have been long in the habit, while investigating hypertrophy of the heart, succeeding acute rheumatism, to inquire respecting the treatment of the original disease; and I have found that, in more than three-fourths of these cases, the hot bath had been employed to relieve the pains of the limbs. Acute rheumatism is a specific, and not a common inflammation. It is not to be cured by general and local bleeding, like other topical phlegmasiæ. The blood, indeed, will be found highly inflamed; but that does not authorize venesection in this particular case, no more than the same phenomenon would in pregnancy. Acute rheumatism is a very manageable disease, if baths and blood-letting are left alone in general, and calomel and opium given, with colchicum and saline aperients. Warm evaporating lotions to the parts inflamed are infinitely better than leeching and baths.

I doubt the utility of warm baths in acute inflammation of internal structures generally—and in many of them, where they are sometimes employed, I am confident they are detrimental. It is by no means uncommon to place a patient, labouring under acute hepatitis, in a warm bath after bleeding. It is hazardous to employ this measure *before* the inflammation is checked, and it is unnecessary *afterwards*. The same practice is often pursued, and always with risk, in pneumonia and carditis. Nothing would induce me to order the warm-bath in either of these complaints. Inflammations of the peritoneum and of the urinary organs, including, of course, the kidneys, are those in which I have observed most benefit, and least danger, from the warm-bath. But even in these, very copious bleeding should precede it—the bowels being well cleared—and the secretions rendered as healthy as possible. There are very few other internal inflammations, where I would venture on the warm-bath.

But there is a long catalogue of chronic disorders, to which THERMAL MEDICINAL WATERS, both internally and externally applied, prove extremely useful—especially when aided by the moral and physical circumstances adverted to in this paper, and which exist, in greater or less abundance, at most of the watering places, in England and on the Continent. Thermal waters act in three principal ways on the human machine:—1st, through the medium of *sensation*, on the nervous system—2nd, through the agency of *temperature*, on the vascular system—and 3rd, by means of their chemical contents, on the secretory and excretory organs. In most chronic complaints, and especially in rheumatism, gout, cutaneous defædations, neuralgia, dyspepsia, glandular swellings, and visceral obstructions, there is pain, uneasiness, or discomfort of some kind, which, indeed, constitutes the chief grievance of the individual. It is no unimportant matter to soothe these sufferings, during the process employed for their cure. The warm bath effects this purpose in an eminent degree, through its agency on the sentient extremities of the nerves distributed over the surface of the body. There is an extensive chain of sympathies established between the skin and the internal viscera; and, through the medium of this channel, agreeable sensations excited on the exterior, are very often communicated to the central organs and structures themselves. Even in this way, torpid secretions are frequently roused into activity and improved in quality, while the secretory apparatus itself is relieved from a host of painful feelings.

The agency of thermal waters on the vascular system is of the utmost importance. Although the temperature of the blood is 98° of Fahrenheit, the surface of the body, when not fevered, is very many degrees below that point. The warm bath, therefore, when about blood-heat, attracts a strong tide of circulation to the surface, and thus liberates internal organs, for a time, from a congestive state of their vessels. This determination to the surface augments the cutaneous exhalation, and, by a well-known reflex sympathy, increases the secretion of the great glandular viscera of the interior—more especially the liver. Even the gentle and alternate flux and reflux of the circulation, from the interior to the exterior, and vice versâ, produce very beneficial effects, in constitutions where the balance of the circulation is broken in a variety of ways, and where several secretions and excretions are vitiated, by stagnation in some cases, and by inordinate action in others.

The chemical agency of mineral waters is not to be overlooked. They contain, in all probability, many ingredients which we cannot detect—and many known agents, which we cannot imitate by artificial combinations. This is proved by every day's observation. Thus, the saline aperient materials, in mineral waters, will produce ten times more effect than the identical materials, artificially dissolved and commixed. The same is true with respect to the chalybeate springs. A grain of iron in them is more tonic than 20 grains, exhibited according to the Pharmacopœia. It is on these accounts that a course of the saline aperient waters, followed by the light chalybeates, as at Ems and other places, combined with the various moral and physical auxiliaries which I have described, may and do work wonders in many chronic maladies.

It is, however, in that extensive class of human afflictions termed nervous, dyspeptic, and hypochondriacal, that a journey to the Baths of Pfeffers offers strong temptations, and very considerable hopes of amendment. To hypochondriacs especially I would recommend this tour. Let them get sea-sick in the Batavier, mud-sick in the Maaes, and dyke-sick in Holland:—let them then ascend the Rhine, amid all the bustle of steamers and hotels—and wind though the romantic scenery of that noble river. They may visit the Brunnens of Nassau—the shopocracy of Frankfort—the clean dull towns of Darmstadt and Carlshrue—the old red castle of Heidelberg—the fairy land of Baden Baden—the prosperous town of Offenburg—the Black Forest—the Falls of the Rhine—the Lake of Wallenstadt, presenting the most splendid lake scenery in Switzerland—and, lastly, the BATHS OF PFEFFERS. Let them be enjoined by their physician to penetrate the gorge of the Tamina, and drink and perspire at the source of the waters in the rock, as the *sine qua non* of cure—let them be conjured to mount the GALANDA, where there is a specific AIR for the removal of low spirits—and then, if their "BLUE DEVILS" are not drowned in the Pfeffers, or blown away on the Alps—they had better jump into the *Tamina*—for their case is hopeless!

But if they experience, as I think they will, the most beneficial consequences of the discipline I have recommended, then I would advise them to prosecute their tower of health still farther. They are now in the vicinity of one of the most magnificent of the Alpine passes—the SPLUGEN. In their way thither, they thread the mazes of the VIA MALA, one of the wonders of the world—where they view, with terror, the infant Rhine struggling through gorges little inferior to that of the Tamina—and over which they pass three times, with the river rolling and roaring 300 feet beneath them.* Descending from the sublime and dreary heights of the Splugen, they behold, with delight and wonder, the road winding down to fair Italy, like a serpent coiled along the rugged steeps of the mountain. Traversing the lake of Como in the steamer, they may wander round the romantic shores of Lugano—embark on the Lago Maggiore, and land on the Boromeo Isles—return by the Simplon, St. Bernard, or Cenis, and penetrate through the centre of Switzerland, back to the Rhine—or across through dull France, to their native shore—ALL IN TWO MONTHS.

---

* See Dr. Beattie's inimitable delineation of the VIA MALA, in "*Switzerland Illustrated*"—a work unequalled for the eloquence of the text, the beauty of the plates, and the fidelity of the descriptions.

THE

# Medico-Chirurgical Review,

No. XLIV.

[NO. 4 OF A DECENNIAL SERIES.]

JANUARY 1, TO APRIL 1, 1835.

---

## A TREATISE ON THE FORMATION, CONSTITUENTS, AND EXTRACTION OF THE URINARY CALCULUS; BEING THE ESSAY FOR WHICH THE JACKSONIAN PRIZE, FOR THE YEAR 1833, WAS AWARDED BY THE ROYAL COLLEGE OF SURGEONS IN LONDON. By *John Green Crosse*, Surgeon to the Norfolk and Norwich Hospital, and Lecturer on Clinical Surgery, &c. &c. &c. 4to pp. 231, with 29 coloured Lithographic Plates. Churchill, London, 1835.

THE present work essentially consists of a systematic treatise on the causes, composition, and consequences of renal and vesical calculi, and on the operations required for their removal; and of three appendices severally devoted to the following subjects—cases of litho-cystotomy—tables shewing the results of operations of litho-cystotomy, chiefly performed in the Norfolk and Norwich Hospital—a catalogue of the express treatises upon gravel, stone, and lithotomy, published in different ages and countries, and of essays or notices referring to those subjects in many periodical and some other works.

Mr. Crosse informs us, in two advertisements or prefaces, that the text of the present Treatise is the Prize-Essay presented to the Royal College of Surgeons of London, with only a very few verbal alterations and corrections. The notes to each chapter were added after the work was in the printer's hands, and the three appendices are of course additions. The Prize-Essay itself, the foundation of the whole, was commenced and completed in the brief time intervening between the latter end of October and the middle of December 1833, and even that brief time was rendered less available by the constant interruptions arising from an extensive private practice.

Such are the apologies for the execution of the work, which the author offers, and he diffidently observes that he can scarcely hope that what he has penned will bear strict inspection, either as to its composition or arrangement. The industry and the ability of Mr. Crosse may allow the reader to dissent from the estimate which his modesty has formed, and to anticipate with pleasure the perusal of the results of his study and experience.

The diseases of the urinary organs have attracted of late so much attention, that the public, we mean the professional public, must despair of seeing much novelty at present. Yet every labourer does something in the field, and the aggregate of benefit is far from inconsiderable. The judicious surgeon derives some advantage from the observations and reflections of various authors, some of whom see more than others, but each of whom will probably have noticed something that escaped the rest. Mr. Crosse may be assured that he derives no discredit from toiling in the same vineyard with Brodie and Prout. We think we need not occupy the time of our readers with any further introductory remarks, and we therefore proceed to the consideration of the first chapter of the work. This consists of some remarks on the causes of urinary calculi.

Mr. Crosse observes that he does not attempt to enter fully into the causes which give rise to urinary calculi. The two most important may be fairly admitted to be dyspepsia, and disease in some part of the urinary apparatus. Both act upon the urine as a chemical fluid—dyspepsia affecting its components as a secretion, local changes disturbing it after it is secreted.

Dyspepsia may be occasioned in various ways, but its usual, or, at all events, its frequent tendency is to induce a superabundance of acid in the stomach, and of acid also (the lithic) in the urine. Dyspepsia is so much more frequent than other calculous disorders, that probably the assistance of other agencies is commonly required to produce them. Those ministering causes are want of exercise, variable climate, peculiar diathesis, articles of diet or of medicine, and, as has been stated, local disease. Before we advert more particularly to the latter, we may glance for a moment at the influence of climate and of food.

Calculous diseases have been said to be extremely rare in hot climates. Yet a glance at the last volume of the Transactions of the Medical Society of Calcutta will show that in Hindostan many cases of stone in the bladder occur.* There appears to be less doubt of their infrequency in very cold countries, and the temperate zone is that in which alone they may be said to prevail. The sympathy which exists between the kidneys and the skin is potent and familiar. The most sudden, if not the most extreme variations of temperature, take place in the temperate zone—the repressed secretions of the surface demand increased exertions of the kidneys, and calls so sudden and so frequent may be reasonably supposed to render them additionally liable to disease.

It has been observed with natural surprise, that certain parts of certain countries are famous for the prevalence of calculous complaints. The diet, the soil, the waters have been accused, with some semblance of reason, but without satisfactory proof. The county of Norfolk is in this predicament. Mr. Crosse indulges in the following opinions in the way of explanation.

> "In the county of Norfolk, where undoubtedly calculous disorders are very prevalent, perhaps even more so than in any other district of the United Kingdom, neither the food, soil, or beverage, so far as I have been able to ascertain, have any particular share in determining such a result. Minute observations upon the climate might better explain the matter; the great prevalence of a north-west wind, and the frequent, sudden, and very considerable changes of temperature, acting upon persons already affected with the most prevailing

---

* A reference will be found to these in our last and the preceding number.—*Eds.*

disorders of the district, dyspepsia, scrofula, or rheumatism, cannot but be regarded as most powerful agents in giving rise to such frequent cases of gravel and stone. I have repeatedly known persons, who were free from gravelly complaints whilst residing in the metropolis, affected by them on spending a few weeks in the county referred to, and relieved, or entirely freed from them on a change of residence, although in each situation they followed carefully the same diet. Can we disregard climate, and the peculiar state of the atmosphere, in our attempts to explain such effects? 3.

It is probably a combination of circumstances which occasions an insalubrity of this description. The inquisitive observer might perhaps discover, in other portions of Great Britain, a keener air than is felt in Norfolk, unattended, notwithstanding, with a corresponding frequency of instances of stone.

The effect of diet is more obvious and immediate on the composition of the urine, than are those recondite agencies to which we have alluded. Luxurious living disposes to the generation of acid, and to gout The indulgence in acids, or in spirituous liquors, speedily gives rise to crystals of lithic acid in the urine; and, parri passu, alkalies determine an alkaline condition of it. There is a fact connected with the operation of food in these cases, to which Mr. Crosse has not adverted. Sir Benjamin Brodie has remarked, that calculous diseases are most frequent in children of the lower classes, and in adults or elderly individuals of the upper ranks. The reason would appear to be this:—That in the lower class the children are ill-fed, ill-clothed, and exposed to all the causes which disorder the digestive organs; while adults, in the better classes, commit those excesses which produce the same results. There can be little question that this explanation approaches the truth. The fact is certainly important.

Local disease, more particularly stricture, and enlargement of the prostate gland, are powerful agents in the production of stone. Whatever interrupts the free evacuation of the urine must tend to this result; for, upon the one hand, the mere accumulation of the urine induces a disposition to the precipitation of its salts; and, on the other, inflammation of the mucous membrane of the bladder, ureter, and kidneys is excited, which, of itself, occasions depositions of the phosphates. A blow upon the loins, injuring the structure of the kidney, or deranging its functions, has been often known to give rise to calculous formations. Whatever creates inflammation of the lining membrane of the pelvis of the kidney, will usually induce the same effects, more especially when the diseased action leads to a preternatural mucous secretion from the surfaces over which the urine, after escaping from the tubuli, passes, in its course towards the bladder.

"Hernial displacement of the bladder, sacculi formed by its inner membrane passing between the fibres of the muscular coat, and prolapsus of the organ (which occurs only in the female,) are so many disposing causes to stone, by creating dysuria, giving rise to an inflammatory and catarrhal state of the bladder, and detaining a quantity of urine constantly within some part of its cavity.

Extraneous substances, as a particle of lymph or of coagulated blood, a portion of bougie, or any other foreign body introduced from without, placed in any of the urinary cavities, so that the urine comes in contact with it, will become the nucleus of a calcareous deposit in any constitution, and in a torrid as well as temperate climate. Such concretions around an extraneous substance are usually alkaline, and there is reason to believe that they are not furnished exclusively by the urine, as it is discharged from the tubuli, but in some measure by the morbid secretion from the lining mucous membrane, whether of pelvis of the kidney, or of bladder, in consequence of the irritation and chronic inflammation excited by the extraneous substance.

Sedentary habits rank amongst the circumstances disposing to urinary concretions, by favouring indigestion, gout, and enlargement of the prostate gland: and where dyspepsia is present, all the causes enumerated act with greater force, and the result is produced with most certainty, by two or more causes combining together." 6.

## OF THE CHEMICAL COMPOSITION OF URINARY CALCULI.

Such is the title of the second chapter. We need not do more than allude to a point or two connected with the subject, the standard works on chemical science supplying the requisite information to all. But Mr. Crosse properly insists on the paramount necessity of investigating the structure of the nuclei of stones. Calculi which resemble them in size and composition often pass away spontaneously, and, under such circumstances, the condition of the urine acquires a paramount degree of importance, and an acquaintance with it is rendered absolutely necessary, to enable us to give effect to our preventive remedies. Actuated by this conviction, Mr. Crosse began, several years ago, to collect and examine all urinary concretions voided by the urethra. The following is the analysis of the first hundred, obtained from the male, and placed in the cabinet of Mr. Crosse.

| | |
|---|---|
| Lithic acid, or lithate of ammonia - - - | 72 |
| Lithic acid and oxalate of lime - - - - | 9 |
| Oxalate of lime - - - - - - - - - - | 14 |
| Carbonate of lime - - - - - - - - - | 1 |
| Triple phospate - - - - - - - - - - | 2 |
| Fusible - - - - - - - - - - - - - - | 2 |
| Total - - - - - - | 100 |

Mr. C. observes that the frequency of small stones voided by the urethra, affords great opportunities of collection and examination. He remarks, also, on the large proportion of calculi, in the above table, containing lithic acid, and on the fact, that oxalate of lime should be met with in so many as twenty-three out of a hundred. His directions for the analysis of calculi of oxalate and carbonate of lime are deserving of consideration.

"The analysis of oxalate of lime is one of the simplest of chemical processes, and can be effectually done upon the smallest portion, even the hundredth part of a grain, so as readily to detect its presence. A particle of this concretion, being submitted to the flame of a spirit-lamp, urged by the common blow-pipe a drop of dilute nitric acid is applied to the residue, and immediately globules of air are extricated, and can be seen rising through the fluid with a magnifying-glass, or even with the naked eye; these globules of air are carbonic acid gas, the heat applied having been just sufficient to decompose the oxalic acid, and out of its elements carbonic acid gas was formed, which united with the lime.

Carbonate of lime, a very rare form of human urinary concretion, gives out globules of carbonic acid gas, on the addition of dilute nitric acid, before the heat of a spirit-lamp has been applied, which distinguishes it from oxalate of lime, upon which dilute nitric acid produces no effervescence, until by heat the chemical changes just described have taken place.

The correction of one error of a writer of high authority is nearly equal to the statement of a new fact, which is my reason for offering these brief remarks upon a simple test for oxalate of lime, Dr. Marcet* having stated that when a portion of this concretion is submitted to a gentle heat, the oxalic acid is drawn off and pure lime left; but this change will not happen, unless an intense heat be applied, the flame of a spirit-lamp, urged by the common blow-pipe, producing only the changes I have described, and leaving carbonate of lime." 9.

The third chapter is devoted to the—

## MECHANICAL COMPOSITION AND GROWTH OF VESICAL URINARY CALCULI.

We need not dwell on the specific gravity of various calculi. Those composed of oxalate of lime are the heaviest, and usually the hardest—next to these are the stones of lithic acid—and phosphatic calculi are the lightest and the softest. But calculi of lithic acid or lithate of ammonia, with a little oxalate of lime, are sometimes remarkably friable, and occasionally break in the bladder from violence in sounding, or, when there are several, by knocking against each other. Mr. Crosse refers to some instances of this description. He conceives that some angular urinary calculi, with flat surfaces resembling biliary calculi, are the consequence of fracture. He removed thirty from the bladder of one patient; they were composed of lithic acid and oxalate of lime.

The ratio of increase of a calculus, when formed and retained in the bladder, is a subject of much importance to the surgeon and the patient. Such a calculus usually continues to increase in size, whilst the latter lives to be tortured by its presence. It is probable, however, that if the patient's health is good, his urine maintained in a natural state, and his bladder not affected by disease, the stone may remain for some time stationary in its size. The facts on this point require deliberate consideration. One only has come under the immediate observation of our author. It was the case of a patient who, twenty years before his death, was assured by his surgeon, after sounding, that he had a stone; he refused the operation, and at the end of that number of years died, and the stone found in his bladder weighed only six drachms and one scruple, and was composed of almost pure lithic acid.

If any calculi in the bladder can continue stationary, those of lithic acid or oxalate of lime may be expected, à priori, to do so; for their growth is slowest, and they are accompanied by the least amount of disease in the lining membrane of the bladder.

"In general, calculi when once formed go on increasing; and the estimate I venture to make, from a careful comparison, in a vast many instances, between the duration of the symptoms and the size of the stone removed by cystotomy, is that a concretion of lithic acid or oxalate of lime will, in an adult, usually grow between one and two drachms in a year, rarely exceeding the latter. The actual increase, in all probability, will be greater, the larger the stone and more extensive the surface presented; but I have never found reason to believe that, in calculi of moderate size, above four drachms have been deposited in a year; the largest vesical calculi I have met with, weighing from eight to twelve ounces, have been fifteen or twenty years in forming. The following case demonstrates the rate of increase with some accuracy in a particular instance.

---

* Marcet's Essay on Calculous Disorders, 1817, p. 121.

A patient was lithotomized, and two lithic acid calculi, weighing seven drachms and a half, were removed, one of which broke into several portions under pressure of the forceps. The patient recovered from the operation, but soon had a recurrence of symptoms of stone, which he bore for above seven years, when he died aged seventy-six. The calculus found in his bladder weighed ℥ij. ʒij. ℈j., and presented on a section a clear exhibition of a portion of the calculus left in the bladder at the time he was lithotomized, and which formed the nucleus of the subsequent deposit. The calculus is composed of lithic acid, and about two ounces were deposited in the period of seven years and a half." 12.

The inexperienced surgeon must reflect, that calculations of the probable increase of calculous concretions, in any determinate period, are liable to be affected by great disturbing circumstances. The presence of a lithic stone in the bladder may give rise to inflammation and disease of that organ, or, deteriorating the health, may lead to the secretion of alkaline urine. In both cases, the phosphates are deposited, and the augmentation of the calculus is more rapid.

Phosphatic concretions, whether primary, or consecutive on lithic nuclei, are in general of quick growth, and never, perhaps, remain absolutely stationary. Mr. Crosse successfully lithotomized a gentleman, who had suffered symptoms of stone only between three and four months; the concretion had taken place upon a soft nucleus of mucus, under a very morbid and catarrhal state of the bladder, with the prostate gland a little enlarged, and a stricture of the urethra. The calculus was so brittle, that it broke into a hundred pieces; and the fragments weighed above four drachms and a half. The soft nucleus occupied so large a space, that the calculus must have measured an inch in diameter; its composition was fusible, with a slight trace of lithic acid.

It may be supposed from what has been already stated, that calculi of slow growth are firm and hard, and of high specific gravity; whilst those of rapid increase present precisely opposite qualities. The comparison, therefore, of the duration of symptoms with the indications of size supplied by sounding, is useful in leading to an estimate of the composition of the stone.

Mr. Crosse again dwells on the necessity of studying the nuclei of urinous concretions, and he adds a few illustrations of the subject.

1. A calculus may receive a sudden increase by the coalition of two smaller ones; about these a deposit takes place, so as to constitute a double nucleus. He has a sample of this in his possession; it was removed from a girl by cystotomy.

2. The regularity or otherwise of the accretion is dependent on some circumstances, to which Mr. C. thus alludes. When regular layers, whether lithic, or composed of oxalate of lime, or of alternating layers of the phosphates, surround the central nucleus, he conceives that the stone was moveable in the bladder. For if, upon the contrary, the stone rests in one position, the deposition is not effected to the same extent on the surface which rests against the bladder, and the nucleus, of course, is no longer central. Mr. Crosse has two specimens of calculi illustrative of this occurrence. One was taken from a patient who, for a long time before death, was confined upon his back in bed, and the flat oval stone, formed in the bladder subsequent to stricture of the urethra, rested constantly on one of its sides, leav-

ing the other exposed to the urine; the weight of the stone was sufficient to keep it in contact with the bladder, and the fresh accretion took place principally upon the free surface, which was rough and more convex than the other; the nucleus was of course not in the centre. The other instance was also taken from the bladder of a patient who was long recumbent on his back before death; the inferior surface of the calculus, on which it rested in contact with the bladder, was smooth, and the nucleus situated near to it. No one can doubt, from the appearances of a section of this calculus, and the smoothness of the surface near which the nucleus is found, that the stone had a fixed position in the bladder, always resting upon the part placed lowest in the figure, and that the fresh accretion, composed of the fusible calculus with much animal matter, took place upon the surface open to the urine. Mr. Crosse intreats the attention of pathologists to this interesting point.

In the succeeding case, the stone is supposed to have not merely reclined in one position in the bladder, but to have been grasped by its muscular fibres.

> "A patient, in whose bladder a stone had been distinctly felt, assented to undergo cystotomy for its removal; but when a very valued friend of mine* went to a distance to perform the operation, no stone could be found on sounding; the disease was notwithstanding present, and the patient was worn down by his sufferings, after a year or two more had elapsed. Two calculi were found in his bladder; the smaller one, composed principally of lithic acid, and weighing two scruples was loose, and presented a regular shape. The larger stone has a nucleus of lithic acid, of a similar shape to the smaller moveable stone, which nucleus is situated so as to project upon the surface, whilst a very bulky deposit of the fusible kind, mixed with much animal matter, has taken place in one direction, and not all around the nucleus. To afford an explanation of such a partial deposit, we must suppose, that the small flat calculus of the dark colour became caught and firmly held by the muscular fibres of the bladder, which organ, being in a very morbid state, the fusible calculus was quickly deposited upon the surface of the nucleus exposed to the urine."

We need not pursue the subject farther; it follows from the preceding facts, that, supposing their explanation to be accurate, if a stone is found by section to have increased in a particular direction, it was not fixed or adherent to the bladder at that point. Mr. Crosse employs the terms fixed or adherent, for they are far from representing the same condition. Stones, he well observes, may be fixed by extending into the urethra or uterers, or by being grasped by the muscular fibres of the bladder, or contained partially in a sacculus, and nevertheless be in no degree adherent; indeed his investigations into this part of pathology have never shewn him a calculus actually adherent to the coats of the bladder, except by a layer of intervening lymph, soft enough to be easily broken through. He is, therefore, tempted to conclude that the numerous instances we read of, where calculi are said to have been found adherent in the operation, accounting for the difficulty in the extraction, have either presented nothing uncommon, or the calculus has been fixed in one of the several ways stated, and not actually adhered to the lining of the bladder. We fancy that most experienced surgeons will be found to agree with Mr. Crosse in this opinion.

---

* The late Dr. Rigby.

### OF CALCULI IN THE KIDNEYS AND URETERS, AND THEIR PATHOLOGICAL EFFECTS.

Such is the subject discussed in the fourth chapter. Mr. Crosse alludes in succession to calculus matter contained in the tubuli uriniferi—to the anatomical disposition of the infundibula and pelvis of the uterer, and to calculi contained in them—to absorption of the secreting substance of the kidney—to the symptoms which characterize obstruction of the ureter—and, finally, to the modes in which those morbid states occasion death. We shall not pursue our author through his somewhat devious track, but shall alter the arrangement without interfering with the matter of his observations.

1. Gravel or small crystals of lithic acid have been said to be not unfrequently met with in the tubuli uriniferi of the kidney. Yet Mr. Crosse has been enabled in two or three instances only to find red gravel in this situation: and he believes he offers an unique case of the discovery of the oxalate of lime in the tubuli.

*Case.* An elderly man was treated for rheumatism and lumbago in a public institution, where he lost appetite, had a diminished secretion of urine, a parched brown tongue, and died in a few weeks. A calculus was found in the left ureter, seven inches from the kidney, completely preventing the passage of urine through that channel into the bladder, and inducing enlargement of the ureter above it, as well as of the pelvic cavity, which was filled with fetid, muco-purulent fluid; the lining membrane of this cavity was thickened and morbidly vascular. The right kidney was of small size, but normal in exterior shape, and in the condition of its pelvic and infundibular cavities. The parenchyma being cut through in different directions, the tubular part was found occupied by numerous white concretions, varying from the size of the smallest seeds to that of a large pin's head; these bodies were distributed over all parts of the substance of the kidney except the cortical portion. On minute investigation, Mr. Crosse found them to be pure oxalate of lime, crystallized, transparent, and situated in the tubuli uriniferi.

Morand has remarked that the rat is subject to calculi, and a neighbour of our author's has several times found pure oxalate of lime in the bladder of this animal. Mr. Crosse seizes the opportunity of remarking on a frequent error of pathologists, the association in the mind, of a calculus of oxalate of lime with the configuration of a mulberry. This shape is occasional, and usually assumed when the stone is of some size. The hemp-seed caculi, the most smooth and polished of all, are composed of oxalite of lime, which, when purest, is a white crystalized, and transparent mass.

2. In order fully to appreciate the causes of the lodgement of calculous matter in the infundibula, perhaps it may be well to notice the following anatomical facts. The tubular substance of the kidney consists, as is well known, of a number of conical bundles of tubuli, which unite to constitute the mammillary processes. These are from twelve to eighteen in number,

and their apices project into the pelvis of the ureter. Yet they do not open into the pelvis directly, but, sometimes singly, sometimes in a combination of two or three, into processes of the pelvis termed the infundibula or calyces. Now the point which must interest the pathologist is this. The infundibula are largest at the mammillary processes, and often contract, so as not to be one-eighth of an inch in diameter prior to their termination in the pelvis, naturally a cavity of small extent. From this of course it follows, that a stone of larger size would lodge in the upper portion of the infundibulum, than would readily pass through its contracted neck into the pelvis.

The membrane lining the pelvis, ureter, and infundibula, and covering the mammillary processes, in which it leaves openings answering to the orifices of the tubuli, is dilatable in a high degree. Sometimes the pelvic and infundibular cavities are found expanded into one large bag, in which there is scarce a remaining trace of the original form.

Mr. Crosse has met with several instances, and he mentions one, in which calculi formed, and increased to a considerable size in the largest part of the infundibula. In the case which he details the calculus was in contact with one of the mammillary processes, which had been partly absorbed to make room for its increase. Such are the facts connected with the lodgement of calculi in the infundibula. Our author indulges in some faint speculation on the symptoms which may indicate the passage of a stone into the pelvic cavity.

> "Seeing," says he, "the narrowness of some of the infundibula before they open into the pelvic cavity, and that calculi do form and increase to a considerable size, (as I have found in other instances besides the preceding,) in the largest part of the infundibula, next the mammary processes, or what has been called the calyx, it appears to me that a nephritic attack, with violent pain, vomiting, and such other symptoms as attend the passage of a calculus along the ureters, may occur from its passing through the narrow part of one infundibula to reach the pelvic cavity. In a patient who suffered from nephritic attacks, the pain occupying the loins and not extending along the ureters, I found on dissection numerous small calculi in the calyces, some in the pelvis, and the infundibula so narrow at one part, that the calculi in the latter situation must have passed with difficulty from the calix. In a nephritic attack of this sort, one infundibular passage only out of several is obstructed, and the excretion of urine may continue, the others offering a passage for it into the pelvis: still we do not find a calculus fixed in the narrow part of an infundibulum, which I suppose is owing to the cavity so readily enlarging, and allowing the foreign body to reach the pelvis, where we most usually meet with it." 19.

The idea may be correct, the suggestion should be borne in mind, yet the cautious critic may exercise his vocation, and doubt if it be yet possible to distinguish the symptoms, which indicate the passage of a calculus concretion from the infundibula to the pelvis of the ureter. It is certain, and Mr. Crosse brings forward some instances himself, that the ureter or the pelvis of the kidney may be filled and obstructed with a calculus, nay, the substance of the kidney may be gradually absorbed, without the concurrence of prominent symptoms. There are few persons conversant with morbid anatomy who have not witnessed cases of this description.

3. It might probably be supposed that obstruction of the ureter would give rise to dilatation of the urinary reservoir above it, and perhaps to

absorption of the substance of the secreting organ. The conjecture of reason is true in fact, and the proofs are of frequent and daily occurrence. The parenchymatous texture of the kidney may be absorbed in consequence of retention of the urinary secretion, whether that be the result of calculus in the bladder, enlarged prostate, or stricture, or obstruction of the ureter—however, in short, it be occasioned. Such absorption is generally attended with augmentation in size of the organ; but when it is produced by a deficient supply of arterial blood, or where the arteries are obstructed or diseased, a diminution of the volume of the gland ensues. In a man who presented one kidney healthy but enlarged, the other was reduced to a small bag; this atrophy appeared to be dependent on extreme ossification of the emulgent artery. We think we need not cite any instances of absorption of the glandular substance of the kidney, in consequence of obstruction of the ureter.

It is a curious question to inquire what quantum of glandular structure is sufficient for the purpose of secreting urine. A very thin remaining layer appears to be adequate to such an office. When one kidney is crippled or disabled in its functions, the other does double duty and commonly acquires additional dimensions.

Mr. Crosse observes that one ureter may be completely obstructed and the function of the kidney connected with it, destroyed, without danger to the patient, or other inconvenience than pain; but if the other ureter become obstructed in like manner, the patient inevitably dies in six or seven days.

4. The symptoms produced by renal calculi are deserving of attentive study. Mr. Crosse's remarks are judicious and valuable.

> "The evils produced by renal calculi are not to be measured by their size; a small passable calculus, in its course along the ureter, causes most severe and acute symptoms, which every practitioner is familiar with; a calculus firmly impacted in and filling the ureter, sometimes gives little pain, although leading to complete destruction of the renal organ; whilst a large calculus occupying the pelvis, and allowing the urine, as it is secreted, to pass on towards the bladder, with much pain brings no immediate danger, and may remain for many years, increasing sometimes to so great a size, that the parenchyma is absorbed to make room for it; and when the calculus is not very large, by keeping up irritation and an increased flow of arterial blood to the organ, it often leads to an augmentation of its glandular substance. A considerable calculus in the pelvis brings less danger of obstruction to the passage of the urine, than of acute inflammation, which arising in one kidney, often affects both and creates fatal suppression of the urinary excretion; in the absence of acute inflammation, a calculus in the pelvis creates a dull heavy pain in the loins, extending sometimes to the scapulæ, at others over the buttocks or to the groins and scrotum, and along the thighs; bloody urine after exercise; dysury and frequent micturition as if there were a stone in the bladder; and by chronic inflammation of the membrane lining the cavities of the kidney, an abundant catarrhal or muco-purulent secretion is formed, which appears with the evacuated urine.
>
> In general one kidney is principally affected, the other being nearly or quite healthy; and we often find that when the urine is clear the patient has most pain, and expresses himself to feel easy when there is a plentiful mucous secretion with the urine; in the former case, the ureter of the affected kidney is temporarily obstructed and clear urine from the other organ, which is healthy, alone

reaches the bladder. This state of ease when the urine is turbid, and increased pain when it flows clear, often attends disease of one kidney, unconnected with a calculus; but a marked succession of symptoms after the above order, always points out one kidney to be diseased and its ureter occasionally obstructed." 22.

An interesting case is detailed by Mr. Crosse. It is that of a man about fifty years of age, who had often passed calculous concretions composed of lithic acid. He had for some weeks complained of pain in the region of the left kidney, with frequent and painful micturition and turbid urine. The latter became clear, pale, and scanty, and suddenly urgent symptoms of a typhoid description supervened. The principal pain was in the site of the left kidney from whence it extended along the course of the ureter to the bladder. Only twelve ounces of clear urine were voided in twenty-four hours. The symptoms became aggravated—the urinary secretion ceased—coma, with stertor and dilated pupils supervened, and in eight or nine days from the commencement of the attack he expired. The disease was confined to the left kidney, which was buried in a great quantity of adipose substance, and was of large size, having the lining membrane of pelvis much inflamed; whilst a calculus completely obstructed the ureter, two inches from its commencement. The other kidney was much smaller, and apparently free from disease; its secretion had probably been suppressed from sympathy with the diseased one. The head was not examined, but no doubt effusion had occurred in it. And all these evils, as Mr. C. observes, were occasioned by a calculus escaping from the pelvis, and suddenly obstructing the ureter.

In another case, a small calculus in the ureter gave rise to suppuration and gangrene about the kidney. The patient was sixty years of age, and had suffered for some months from what was considered rheumatism in the loins, thighs, and knees. Twice after riding on horseback he was seized with urgent pain in the right kidney, attended by vomiting, and proving so severe as to cause him to scream out; the second of these attacks was accompanied by obstinate constipation; with a scanty evacuation of very turbid urine. Various remedies were employed. The urine soon became clear, but only half an ounce was voided at a time, and not above six ounces in the twenty-four hours—there were pain and tenderness on pressure in the region of the right kidney—the abdomen was prominent—the pulse 60. Spontaneous diarrhœa soon supervened—the pulse intermitted—the animal heat failed in a remarkable degree—and in six days from the commencement of the symptoms the patient died, the intellect remaining unaffected to the last.

Mr. Crosse concludes the chapter by a few observations on the rarity of ulceration of the mucous membrane of the kidney, and on the course which abscesses connected with the organ may pursue.

"I have been surprised to find how rarely, under extreme disease and profuse muco-purulent excretion, is the lining membrane of the pelvis and infundibula ulcerated; such a state occurs from scrofulous disease of the kidney, but rarely as a consequence of urinary concretions; when from their presence abscesses arise, these are situated in the surrounding adipose substance, and may burst into the pelvic cavity of the kidney, or into the peritonæal cavity, or into the contiguous part of the colon, or may make their way circuitously to the surface of the loins; sometimes the matter, besides bursting in one of the two last directions, also forms an opening into the pelvic cavity of the kidney, from which calculi may escape into the colon or outwardly upon the loins; numerous instances of the latter state of disease have been related; rendering it superfluous to pursue the subject by fresh cases of the kind." 25.

On glancing back at the chapter we now quit, we cannot refrain from remarking that it contains many interesting facts, and is worthy the perusal of the student and the surgeon. And here we may take the opportunity of indulging in one observation. In reviewing a work of this description, a work essentially composed of facts, yet enriched by a course of laborious reading commenced and conducted for the special purpose, criticism is equally uncalled for and absurd. The critic in such circumstances usefully sinks into the analyst, and the public require not the desultory, perhaps the hasty opinions of one who has paid little or no attention to the subject, but the mass of information collected with care by the author. Criticism is more adapted to works in which speculation predominates, to the keen examination of new views, the detection of fallacy, and exposure of ignorance. Few speak more plainly or more boldly than ourselves, few criticize more honestly, though many, no doubt, can do so more ably, when the proper occasions present themselves. But the aim of the conductors of this Journal is rather to disseminate useful information, and to foster the taste for fact and for induction, than to affect to say smart and clever things at the expense of the author, too frequently at that of truth. Our science is essentially a deep and a sedate one, and its philosophy is compromised by the indulgence of flippancy and levity.

## ON CALCULI IN THE URETHRA AND IN THE PROSTATE GLAND.

This chapter contains many facts connected with the subjects upon which it treats. Mr. Crosse successively alludes to calculi impacted in the prostatic portion of the urethra—in its membranous part—and in the substance of the prostate gland. To these varieties we shall successively allude.

A calculus which has just quitted the bladder not unfrequently becomes fixed in the commencement of the urethra, and gradually increases to a considerable magnitude, so as to lodge partly in the prostatic part of the urethra, and partly in the bladder. The following are the symptoms laid down by Mr. Crosse.

> "A stone thus placed creates great pain, and is usually accompanied by constant stillicidium; it is easily felt with the sound, but this instrument meets with great obstruction when an attempt is made to introduce it into the bladder; indeed, if there have long been stillicidium, this viscus becomes so much contracted, that there is hardly a vesical cavity remaining to receive the end of the sound. The surgeon may recognize such a position of the stone not alone by the symptoms enumerated, but by the sound coming in contact with it before being passed deep enough to enter the bladder; and if the stone occupying the prostatic urethra be large, it can be felt by the finger introduced *per anum*. It is highly expedient that an operator should know when a stone occupies this peculiar situation, as he will meet with great embarrassment from proceeding, in such a case, under the idea that he is about to remove a loose stone from the cavity of the bladder." 26.

In illustration of this caution, Mr. Crosse relates a case. A very experienced lithotomist refused to operate upon a patient aged sixty-six years, on account of the bad state of his health, and the morbid condition of his bladder as indicated by the abundant muco-purulent discharge voided with the urine, but without detecting or suspecting any peculiarity in the situation of the stone. After this advice was given, the patient lingered in great misery between two and three years. Mr. Crosse had an opportunity of examining his bladder. A large calculus occupied its neck and the prostatic part of the urethra which were become one uniform cavity, the prostate gland being absorbed, and the fundus of the bladder contracted so as to present a cavity not bigger than a small nut-shell. The ureters and vasa deferentia opened into the cavity occupied by the stone.

Had an examination been made during life *per anum*, the stone would have been detected by the finger just within the sphincter. For the removal of a calculus so situated, Mr. Crosse recommends the lateral incision in the perineum, where a staff can be introduced into the bladder, or the operation of cutting on the gripe where it cannot. An instructive case is related by our author.

*Case.* "A lad, aged eighteen years, had suffered symptoms of stone in the bladder for more than half his life-time, and when a surgeon sounded him with a view to cystotomy, he found some peculiar circumstances, the sound meeting the stone early, and when fully introduced not striking fairly against it in the bladder, as is usual. For several years there had been stillicidium urinæ. Another surgeon of greater experience sounded the patient and said the bladder was filled with a large calculus, for the sound touched it in every direction; this was indeed the fact, but the inference as to a large calculus filling the bladder was wrong. Previous to an operation being undertaken, I had the opportunity of examining the patient, and found that the sound, on being introduced, came very soon in contact with the stone, before it could have gone deep enough to reach the bladder. With the finger *in ano*, I could feel the stone, as big as a pigeon's egg, through the coats of the rectum, immediately within the verge of the anus, and no prostate gland could be detected. The sound having passed behind the stone I could feel it readily, with my finger *in ano*. Examining still more minutely by passing my finger along the perinæum, verge of the anus, and anterior wall of the rectum, till it had arrived in the bowel beyond the stone, I found no prostate gland, a proof that the stone was not in the bladder, but partly or entirely in the urethra. If any prostate gland remained, it was situated higher up than my finger would reach, and beyond the stone; in all probability this gland had become absorbed from pressure of the stone and obliteration of its ducts." 28.

In the operation, the gorget would not pass on, although the stone was not situated at a greater depth than an inch and a half from the external wound. The forceps would neither pass into the bladder, nor could their blades be opened so as to clasp the stone. After many rough attempts, the stone was turned out with the scoop; it weighed six drachms.

"I thought that in such a case, if the curved staff be used at all, it should be passed on the pubic or anterior aspect of the stone; if it be passed posteriorly or on the rectal aspect, there is great danger of wounding the rectum. By a free external incision, carried down to the stone, in the usual situation of the lateral operation, and by the scoop passed in on the pubic side, with the finger *in ano*, the surgeon may, if well acquainted with the situation of the stone, and assured of its not extending into the bladder, remove it with ease, expedition, and safety." 28.

To proceed with the sequel of the case. Some days after the operation the fæces passed through the perineal wound, proving the rectum to have been injured.* But in seven weeks the wound was healed, and the patient appeared cured. At the end of nine months he returned, with a calculus as large as a pigeon's egg in the urethra. The staff came in contact with the stone just beyond the bulb of the urethra, and passing behind it entered the rectum by a fistulous opening. When the urine was voided, more passed by the rectum than by the penis, and when the bowels were relaxed, a little fæces got into the urethra, and was voided by the penis with the urine. This stone was removed by the lateral incision; it weighed half an ounce. Yet the patient remained affected with recto-urethral fistula, and was again troubled with urinary concretions, several of which passed into the rectum and so escaped, the opening between the urethra and rectum being large enough to receive the end of the finger.

So much for calculus lodged in the prostatic part of the urethra and continuous portion of the bladder. We have seen several cases of the kind. In one (the patient had stricture and false passage,) the existence of a calculus was not suspected. In another many very able surgeons were deceived, because they thought that the stone was of large size, so large as to preclude the ordinary operation of lithotomy. The recto-vesical operation was adopted, but the calculus proved of inconsiderable dimensions.

Mr. Crosse proceeds to the consideration of calculus occupying the prostatic or membranous part of the urethra, without extending into the neck of the bladder. It usually creates less urgent symptoms, and may remain there for many years without materially affecting the health. Mr. Crosse relates some cases in point. Sometimes, however, a stone in the membranous or prostatic part of the urethra will occasion very serious consequences. Mr. C. details a case in which the bladder was dilated, inflamed, and the seat of a gangrenous abscess at its fundus, while the ureters, and the pelvis, and infundibula of each kidney were enlarged. Yet, in this case, there was almost impervious stricture, and it is not quite fair to attribute the mischief solely to the calculus.

> " When a calculus (says our author,) of considerable size is situated in the membranous part of the urethra, immediately behind the bulb, if the finger *in ano* can be carried beyond it, so as to press it forward in the perinæum, it may be removed by a semilunar incision, as in cutting on the gripe; indeed if there be an insurmountable stricture anterior to the calculus, you can scarcely adopt any other operative proceeding." 30.

It is singular, as he observes, that calculi lodged in the urethra, even of large size, are sometimes not discovered with the sound or catheter, which it seems difficult to explain, unless we suppose that the operator, thinking only of the bladder, neglects the slighter impression conveyed by the stone in the urethra; it may however happen that the muscles about the urethra, embracing firmly the instrument, prevent its touching the calculus, which is generally lodged in a depression or cavity, formed by it and answering to its size. Calculi in the membranous part of the urethra, are sometimes discharged at the perinæum, by the processes of ulceration or of sloughing. In the instance of a lad of 17, a calculus weighing two ounces and a quarter, was voided in this manner through a fistulous opening in the perinæum. He lived for two years afterwards, voiding other small calculi by the wound, which never healed.

---

* Wound of the rectum is far from unfrequent in the operation of lithotomy. Yet it seldom appears to be productive of mischief, and usually the wound in the bowel heals. We have seen several instances of this description.

"Sometimes culculi in the urethra, quitting that passage by ulceration or otherwise, and getting into the cellular tissue under the integuments, descend into the scrotum, and still maintaining a channel of communication with the urethra, so that the urine gets access to them, they increase to an immense size; I am acquainted with a case where a calculus weighing eight ounces was removed from the scrotum of a man thirty-six years of age, and which I conjecture to have been formed in the above manner. The removal of such concretions is a very easy and safe operation; they are probably always composed externally of the phosphates, and if the explanation I give be correct, the cavity in which the stone is lodged will be found to communicate by a fistulous channel with some part of the urethra." 32.

In a note, Mr. Crosse refers to two facts:—one related by Gräfe in his Journal—the other by Valentine Mott. Gräfe's case was that of a shoemaker who had had for twenty years, a stone in the scrotum, which he supported in a bag; at length it got to such a bulk, that, during exertion at stool, it ruptured the scrotum and escaped: it weighed twenty-six ounces. The wound contracted and with surgical assistance healed. Mott's case was an instance of that kind of diseased action of the scrotum by which it increases, and becomes converted into a calcareous substance, independently of the urinary excretion. He successfully removed the disease by an operation.

Stones may lodge in any part of the urethra anterior to the membranous. But Mr. Crosse only deems it necessary to notice one case of this description. It conveys a hint which incautious practitioners should take.

*Case.* Mr. C. was summoned to a little boy, who had laboured for three days under incapacity of voiding his urine, accompanied by inflammation of the scrotum. This part was much swollen, and in a state of gangrene. On examination Mr. C. found a calculus lodged just within the orifice of the urethra, which it totally obstructed. He cut it out, and the urine flowed. But it was too late. The urethra had given way, the sloughing of the scrotum was the consequence of urinary infiltration, and in thirty-six hours the patient died. In the preparation which is preserved, the bursten part of the urethra answers to the anterior part of the scrotum; the bladder hangs flaccid, though its cavity is large; the ureter and pelvis of each kidney are greatly distended and increased, from pressure of the retained urine.

Our readers may be aware, that Sir Benjamin Brodie is more averse to cutting into the urethra for the removal of calculi anterior to the urethra than behind it. He thinks that urinary extravasation is more frequent after the former than the latter operation. We mention this opinion in connexion with and in extension of our author's observations, though, indeed, on this subject he may be said to offer none. We may mention that we lately saw an instance of this sort. A policeman applied to us on account of a pebble, which he said, had got into his urethra. We could feel, both externally and with a probe, a foreign body in the fossa navicularis. As he said that it had entered, we concluded that it could be extracted. We seized it with a fine pair of forceps, and endeavoured to remove it in that manner. This could not be done, but after a little trouble we broke off some particles from the foreign substance, and readily extracted the remainder. It was a lithic calculus, and the policeman's story was, of course, untrue. A good deal of inflammation of the cellular tissue of the penis followed, but this after a time subsided.

Calculous concretions form in the ducts of the prostate gland. They are *not* deposited from the urine, nor derived from the kidney or the bladder; they are formed from the natural or disordered secretion of the gland, and uniformly composed of phosphate of lime.

Mr. Crosse has a preparation, and all surgeons must have witnessed instances, in which several small calculi, of the size of a pin's head, and of a brown colour, are observed in the substance of the gland, communicating with ducts that open at some distance on the surface of the urethra.

> "It is only in this early stage that their true origin and situation, in the excretory ducts, can be demonstrated; for the urethral orifice of the ducts may close, or the cavities ulcerate, or enlarge as the concretion enlarges, until an extensive membranous cyst is formed, the substance of the gland being absorbed. When small and thus imbedded in the ducts, prostatic concretions cause none of the characteristic symptoms of urinary calculi and cannot be detected; it is only when they increase and rise so as to project at the orifices of the prostatic ducts, or escape, as they may do, into the urethra, that they can be discovered by the sound: but when of large size, or when numerous and contained in one cyst, they can be detected by the finger pressing upon the prostate gland through the rectum."*

It is when large, or numerous in one large cyst, or projecting into the urethra, that prostatic concretions give rise to the symptoms of stone, frequent, painful micturition, and discharge of mucous from inflammation of the urethra and neck of the bladder. Their frequent combination with stone, may lead us, Mr. C. thinks, to suspect that they are often connected as cause and effect—the prostatic calculi being, in his opinion, the cause, the vesical the result.

---

* "Concretions in the prostate gland, commencing in the ducts, often at a distance from their urethral orifice, even at the very bottom of a duct, go on increasing until each duct is enlarged into a pouch, rendering an escape of the concretion into the urethra, through the narrow orifice of the duct, impossible; the narow orifice by which the pouch communicates with the urethra becomes often closed in consequence of inflammation and effusion of lymph; the pouch is a secreting cavity, which furnishes additional deposit; and as the concretions enlarge or multiply, the pouch enlarges in the direction where there is least resistance, towards the lateral or posterior surface of the prostate gland; thus, in extreme cases, the concretions are felt *per anum*, lying close to the rectum, and in a cavity no longer communicating with the urethra. The three plates of prostatic calculi form a series sufficient to support this explanation of their formation. Cases are on record of calculi passing away from the bladder by the rectum, (see *Memoirs of the Medical Society of London*, vol. iii. p. 536;) we can readily conceive how prostatic calculi, when large and in sacs no longer communicating with the urethra, may by abscess and ulceration take this, the shortest route, for their discharge." 34.

The treatment briefly occupies Mr. Crosse. In extreme cases where a large prostatic calculus, or a cyst containing many small ones is discovered, it may be right, he conceives, to cut down to the prostate gland by the perinæum, and remove the concretions by the lateral operation of lithotomy. He quotes the sentiments and the practice of Mr. Wilson, Sir B. Brodie, and Sir A. Cooper. The first says, when prostatic calculi are very troublesome, and can be felt through the rectum, they may be cut out as in operating for stone by the gripe. Sir B. C. Brodie, in his Lectures on Lithotomy says you may extract prostatic calculi with Weiss's forceps. Sir A. Cooper (*Surgical Lectures*) cut upon the staff down to the prostate gtand, and removed numerous calculi, which had not only excited painful feelings in the perinæum, but a degree of mental irritation bordering on insanity.

To recapitulate, prostatic calculi are not urinary concretions, but are formed, and may increase without the urine having access to them. They may notwithstanding rise to the orifices of the prostatic ducts, or get into, and be detained in the urethra, or pass retrograde into the bladder, becoming the nucleus around which a deposit from the urine takes place. It must also be remembered that prostatic calculi may, from the irritation they occasion, give rise to vesical, and that they may give rise also to all other alterations of the urethra, bladder, and the kidneys, which follow on stricture and on stone, in short which are the formidable and familiar sequelæ of diseases of the outlet of the urinary apparatus.

With one other quotation devoted to another fact, we conclude the present chapter.

"Concretions of another sort about the neck of the bladder ought to be noticed. In aged persons, particularly with hypertrophy of the prostate gland, a bladder diseased, and the veins about it and about the rectum varicose, concretions of phosphate of lime, varying in size from a pin's head to a kidney-bean, are often found in the veins; sometimes they present the appearance of a white pea, and an equality or projection is observable answering to the surface by which the body adhered to the coats of the vein. These concretions have no connexion with the urinary or any other excretions, and should not be regarded as calculi, they are a morbid growth from the coats of the vein, to which at an early period they are invariably adherent, and a membrane covers them, upon the surface where not adherent, which I presume is the extended inner coat of the vein, the morbid growth originating in the outer coat. Fig. 6, (a) of plate ii, shews a portion of vein containing one of these concretions, and d, e, f, g, exhibit them of different shape and size, their chemical composition is chiefly phosphate and carbonate of lime, and they approach nearer to ossification than to calculous concretions. I remember that Professor Meckel has well represented them, but know of no English author from whom they have received the same attention." 36.

## ON CALCULI IN THE URINARY BLADDER AND THEIR PATHOLOGICAL EFFECTS.

From describing the nature of calculi in the bladder and their history, when placed in the urethra, Mr. Crosse proceeds to the enumeration of their pathological effects, on the organ that contains them, on the kidney, and the urethra. Yet his diffidence induces him to render the chapter incomplete and unsatisfactory, and he admits that the wish to advance scarcely more than he can demonstrate, has prevented him from rendering his statements so complete and so systematic as they might be. We respect the motive, but regret the result. The mass of the profession are still in a state of comparative ignorance of the chain of consequences, pathological consequences, that follow on diseases of the urethra and the bladder. A methodical investigation and an accurate account of them, would undoubtedly prove a valuable addition to the information generally possessed.

Our author judiciously avoids the enumeration of the symptoms occasioned by stone in the bladder. It would be well if other authors would waive with equal sense the repetition of the school-boy's lesson. He successively adverts to the pathological effects of vesical calculi on the bladder, the urethra, and the kidneys. For the reason we have stated, the catalogue is incomplete, and Mr. Crosse confines himself, or nearly does so, to what he has personally witnessed and can demonstrate. We may remark too that Mr. Crosse's style and method, are not calculated to give effect to the matter they display; for his style is inelegant, and his method is confused. We look in vain through the laborious page, for the ornament of the accomplished, or the clearness of the practised writer.

The effects on the bladder of a calculus in it, may simply be referred to inflammatory action, and to the efforts of the muscular substance of the organ, occasioned by its irritation. From the first results extreme vascularity of the lining membrane, an abundant muco-purulent discharge from its surface, rarely ulceration, but sometimes sloughing. From the second, arises excessive thickening of the muscular coat, or sacculi of the mucous membrane between its fibres.

Chronic inflammation of the mucous membrane of the bladder is a common consequence of the presence of a calculus. We have stated that ulceration is rare, indeed it is surprising how very rare it is considering the marked disposition to this action evinced by mucous membranes in other parts of the body. It might be expected from what we know of the œconomy, that the violent straining to repel the urine occasioned by the residence of a calculus in the bladder, should give rise to much thickening of its muscular coat. That thickening is observed, from a similar cause, in cases of long continued stricture of the urethra, and in cases of enlargement of the prostate. Whatever calls for augmentation of effort on the part of the bladder, tends to the production of this pathological condition. Abscess is not infrequent in the thickened coats. The matter may find an outlet into the cavity of the bladder, or it may escape into the peritonæal cavity and prove destructive; or without the abscess bursting, fatal peritonitis may be induced. These abscesses in the thickened coats of the bladder slough or become gangrenous in extreme cases, and aged persons, who have for years been sufferers from stone, usually die from this cause. There are also other morbid conditions determined by the demand for violent expulsive efforts;—such are the augmented power and size of the muscles about the neck of the bladder, levator ani, transversales and ejaculator—the general fulness of the perinæum—the varicose state of veins about the rectum and neck of the bladder—consequences of painful dysury and vesical tenesmus.

The thickening of the bladder may actually proceed to such an extent, and may be accompanied with such contraction as to grasp the contained calculi, and not allow half an ounce of urine to remain in it. This happened in the case of Dr. ——, in whom an enlarged prostate gland was followed by four vesical calculi, which at death just filled the cavity and were so tightly compressed, that the lining membrane was indented by them, and still retains the impression in the preparation preserved by Mr. Crosse.

Sacculi of the bladder are the legitimate offspring of the same class of causes. During the forcible contraction of the organ, the mucous membrane is forced, by the re-action of the fluid, into the interstices between the fibres of the muscular coat. Such at least is the ordinary, and perhaps, in general, the correct explanation. It is certain that these sacculi are met with in a great proportion of persons who have laboured for a long time under stone. They are usually small, but when once formed, they may go on enlarging to a great size, and if numerous, may become capable of containing more urine than the proper cavity of the bladder. It is mostly in the adult and the aged, that sacculi of the inner membrane are met with. Mr. Crosse has never seen them in the very young. He believes that their occurrence would be more frequent, were not the bladder to thicken in its muscular coat and remain contracted close to the calculus; it is where the bladder is not contracted, and its coats not much thickened, that we find large sacs of the inner membrane, which cannot form when the coats are thickened and the cavity small.

> "Although sacculi are so frequent, large sacs are rarely found, and, consequently, a sacculated calculus in the bladder, formerly so often spoken of, and now occasionally reported by an unsuccessful operator to be present, may be considered a rare occurrence; it is however one of the complications of this disease, which the surgeon ought to bear in mind, and have a clear notion of."* 38.

Before he dismisses the subject of sacculi, Mr. Crosse observes that they frequently arise from stricture of the urethra, independently of calculus. He notices a fact which has attracted the attention of other surgeons—the occasional simulation of the symptoms of stone when none is present Mr. Guthrie,† who has lately drawn attention to this circumstance, attributes its occurrence to a sacculus, containing urine, coming down with a sort of blow upon the instrument; and he talks of the fluttering strokes of the bladder.

---

* "The late Mr. Martineau, in his paper on lithotomy in the *Medico-Chirurgical Transactions* (vol. xi. p. 404), has expressed doubts about calculi being sacculated, giving rise to difficulty in the operation, which shews the disadvantage of trusting to individual experience, without the aid of extensive reading and examination of pathological collections. This present month (October, 1834), in a hospital patient who had for twenty or thirty years been affected by stricture of the urethra, and died from perinæal abscess and urinary infiltration, arising from rupture of the urethra behind the stricture, I found a large sac, or hernia of the inner membrane, just above the termination of the left ureter, filled with a calculus of large size, which also projected into the cavity of the bladder, the entire calculus being of an hour-glass shape, with the isthmus answering to the narrow neck of the sac. A precisely similar specimen is preserved in the museum of the Royal College of Surgeons in London."

† Our readers may turn to our review of that gentleman's work.—EDS.

Mr. Crosse, less speculative, expresses the fact, but does not venture on an explanation. His case, for he offers one, is instructive.

*Case.* A gentleman had for many years severe stricture, which was at length completely and permanently cured; but painful, frequent micturition continued; he was repeatedly sounded for stone and had the opinion of many surgeons of eminence, without obtaining entire relief; the urine deposited much mucus; after suffering thus several years, he died, and dissection threw no other light upon the cause of the painful symptoms than the numerous large sacs of the inner membrane.

We lately saw an instance in which it was presumed that sacculi existed. But it was presumed by a surgeon, who pronounced on the presence of a stricture that apparently existed only in his want of dexterity or conscience. We were consulted by a gentleman on account of a stricture, under which he said he laboured. He had been under the care of a surgeon of some little repute in London, who not only told him he had stricture of the urethra, but sacculi of the bladder also. He said that he had sacculi principally on account of the occasional violence with which the end of the instrument was struck, when introduced into the organ. We passed without difficutty a No. 14 sound into the bladder. That convinced us that no permanent stricture existed. We repeated the introduction of the sound with facility on two subsequent occasions. We were certain that there was no stricture—we were not sure that there were sacculi, for the urine was merely a little too acid, and the "fluttering strokes" were never felt by us. We prescribed those remedies that were calculated to improve the condition of the digestive organs, and to lessen the acidity of the urinary excretion, and we relieved the gentleman from much of the anxiety and alarm which he had laboured under. Our opinion was confirmed, and our practice sanctioned by Sir Benjamin Brodie, who, at our request, saw the patient.

Stricture of the urethra is more frequently a cause than a consequence of vesical calculus. But sometimes inflammation extends from the bladder to the urethra, and severe permanent stricture at the membranous part is produced. Sometimes the stricture arising from inflammation is suddenly established.

*Case.* A patient in advanced years suffered inflammation of the lining membrane of the bladder, apparently in consequence of numerous small concretions of lithic acid lodging in it, after descending from the kidney; the inflammation extended to the urethra; there was complete retention of urine, and difficulty in introducing an instrument. A surgeon, in rude attempts with the catheter, made a false passage anterior to the prostate. The patient died.

It is easy to suppose, what is the fact, that the combination of urinary calculus with stricture is productive of the worst effects. In a case of this sort that occurred to Mr. Crosse, stricture gave rise to disease of the bladder, to stone, to fistulæ in perineo, and to death. On dissection, the bladder was found greatly thickened in its coats—its lining membrane covered with adherent lymph, and in some places gangrenous—the urethra behind the stricture much dilated, and broad bands extending across the passage at this part, forming a net-work, behind which a calculus, apparently of lithic acid was detained.

The alterations effected in the kidneys must be a source of the highest interest to the modern pathologist and surgeon. We repeat that those changes are imperfectly understood by the best informed amongst us; perhaps not at all by the routine practitioner. Let us hear what Mr. Crosse has to advance.

> "When an urinary vesical calculus has been formed for years, and has brought on severe symptoms, and especially if attended by stricture of the urethra, or enlarged prostate gland, the kidneys, if before healthy, become involved; the severe disury causes enlargement of the ureters from distention of the retained urine, and inflammation extends along them, even to the kidney itself. The pelvic cavities also became altered in shape and enlarged, the infundibula extended or unfolded, and the lining membrane of all the cavities thus acted upon, from repeated attacks of inflammation, is thickened and furnishes a catarrhal secretion. The parenchymatous substance of the kidney is more or less absorbed, the mammary projections are obliterated, spurious hydatids occupy the cortical part, and all the serious evils (ulcerations, contiguous abscess or gangrene) described in speaking of calculi in these organs, are met with as sequela of the vesical calculus." 41.

He subjoins two cases in illustration of this very brief, and we must say very imperfect, epitome of the morbid conditions of the kidney.

*Case* 1. In this patient, the bladder was much thickened and contracted, with stricture of the urethra, and an enlarged prostate gland. One kidney was but little altered, the pelvis only being dilated. But the other was very large, and buried in an enormous mass of fat, in which abscesses were situated. The whole substance of this kidney was softened and parts of it gangrenous; the pelvic cavity much enlarged, filled with fetid urine and mucus, and its lining membrane thickened and studded with clots of extravasated blood.

*Case* 2. The stone, in this instance, was consecutive to an enlarged prostate gland. The latter seemed to occupy half the cavity of the bladder, by a general enlargement of the lateral lobes. The coats of the bladder itself were much thickened at the fundus, where an abscess had formed. One kidney was greatly diseased; the mammary processes were obliterated—the pelvis much enlarged—and its lining membrane thickened and extremely vascular.

In reference to this case, Mr. Crosse alludes to a practical point in the management of the catheter in cases of enlarged prostate, which we may incidentally touch on. Perhaps we had better let our author speak.

> "I had frequently (says he) to introduce the catheter, during the two or three years that I was almost daily in attendance on him, and could only succeed by using the gum-elastic instrument; and when I had passed it down to the prostate gland, I held the stilet fast, and pushed the canula off it for two inches, by which manœuvre, the end of the canula, as it passed through the prostatic portion of the urethra, was turned upwards, answering to the curve of the passage, and thus entered the bladder; I could never succeed but by adopting this method."* 41.

---

* "The late Mr. Hey, in his *Practical Observations on Surgery* (p. 437, plate

## ON SOUNDING FOR A STONE IN THE BLADDER.

Mr. Crosse dedicates a separate chapter to sounding, and takes a comprehensive view of this, too often thought a trivial operation. The lithotritists have certainly done much to enhance its applicability and use, and the necessity which now exists for the detection of small stones has led to the employment of much care, and the accomplishment of some improvements in the method of proceeding. Mr. Crosse appears to think strongly on the subject.

"Few operations (he says) are more abused and less skilfully practised than this, an instrument being unceremoniously thrust into the bladder, wherever there are symptoms resembling those of stone; and not only the young and over-zealous, but even the well educated and more experienced surgeon, persists often in making repeated examinations to find a stone, where none happens to be present, fearing lest he should fail to detect it, and lose the opportunity of éclat from a case of lithotomy. I have observed two strong reasons against the practice of frequent and persevering sounding; first, because it is not without danger, and secondly, because there are so many other morbid conditions of the urinary organs, giving rise to symptoms resembling those which a vesical calculus ordinarily produces. In consequence of persevering and unsuccessful attempts to discover a stone with the sound, in a little boy, inflammation of the bladder came on, attended by vomiting, and extending to the peritonæum; the most active antiphlogistic treatment failed to arrest it, and death ensued in four days." 48.

Deserting the exact path pursued by Mr. Crosse, we shall first determine the most proper mode of performing the operation, and then take notice of some cases in which it may be fallacious or improper.

A solid instrument of steel is the best sound. It should be as long as a catheter, and curved for the last three or four inches, that it may project into the bladder; it should not be so large as to fill, much less to distend the urethra, but of moderate size, that it may readily be moved backwards and forwards in this passage, and its curved part turned in different directions in the bladder. Every surface should be well polished, and the handle, being always intended to suit the operator, should be broad enough to receive the thumb and two fingers, and not small, whatever be the size of the rest of the instrument. It is necessary to have the handle well polished, that the fingers may touch a greater surface, and receive and recognize the most delicate impression; by being wedge-shaped, or thinner at its extremity than next the body of the instrument, it has the advantage of increasing the impression conveyed to the touch by any resisting body, when the instrument is pushed onwards, the most usual and always the first movement to be given it in sounding. The name of the instrument-maker should *not* be on the handle, as it interrupts its necessary smoothness.

Children are never sounded in the erect posture; but the first examina-

---

ii. ed. 1810), first described the effect of withdrawing the stilet of a flexible catheter a little, increasing its curvature and bringing the end of the instrument forwards. I refer to a different manœuvre, holding the stilet fixed, and pushing the catheter off to the extent of an inch or more: one of these plans will often succeed, in cases of enlarged prostate, when the other fails; and often the surgeon accomplishes his object by adopting each method in succession."

tion of an adult should be made in that position The sound should be introduced with the utmost possible gentleness and lightness, when a stone of any size, if loose in the bladder, usually falls down upon its neck, and is felt by the instrument on entering. The methodical exploration of the bladder is so well described by Mr. Crosse, that we would not mar nor mutilate its consistency. We give it to our readers entire.

> "By alternately depressing between the thighs, and elevating the handle of the curved sound, you vary the extent to which it projects into the bladder, and will often in this movement feel a grating of the calculus against the instrument; the impression thus obtained is usually obscure and seldom to be relied upon. With the handle depressed more or less, and held centrally, answering to the median line of the body, you may jerk it upwards and backwards towards the rectum, when it will strike a stone lying in that direction, producing a sensible resistance and often also an audible sound, satisfactory evidences, when conjoined, of a calculus being present. You may give the same movement to *the sound*, with the handle inclined more or less to one groin, and thus explore each lateral, as well as the posterior part, of the bladder. Should a stone not be felt under these movements of the sound, you may suspect it to be on the pubic or concave side of the instrument, when it will be felt by your drawing the instrument downwards and forwards, which movement should be performed first with the handle answering to the median line and more or less depressed between the thighs, and afterwards, with inclined obliquely to either side, which will explore the lateral and anterior part of the cavity; if in any of these trials, the stone be felt, touching the concave side of the sound, you know it to be situated towards the os pubis; you may also, with the curved sound projecting considerably into the bladder, turn the handle to some extent upon its own axis, making its extremity describe a part of a circle, and sweeping the upper and lateral parts of the bladder. By a practised hand, the sound is in a short time made to perform these different movements, and the object is, by a regular succession of them, to carry the sound to every part of the vesical cavity.
>
> Where a careful sounding is required, the patient should be placed horizontally on his back; indeed the surgeon should always bear in mind how advantageous it is to vary the position of the patient, and how much may be gained by so doing. If, when the patient is standing, the stone be felt on the pubic side of the instrument, and when dorsally recumbent, you find the stone behind it, towards the rectum, you know it to be moveable and loose. The sound being in the bladder, the shoulders of the patient may be raised into the half-sitting posture, or they may be depressed greatly so as to have the pelvis on the top of an inclined plane and make the axis of the spine answer to an angle of forty-five degrees, this latter being the method to remove the stone from the neck of the bladder and carry it to the fundus; he may likewise be placed on either side, or upon his hands and knees with the face downwards; all these changes of position should be made after the sound is introduced; the last is particularly applicable to cases of enlarged prostate gland, behind which there is a cavity not accessible to the long curved sound by any movement that can be given to it; and you can only remove this defect by changing the situation of the stone in the bladder, which is accomplished by altering the position of the patient.
>
> Where the sound touches the stone in different directions, and is found to pass over a large surface of it, you may conclude it is of large dimensions; but when, under the same position of the body you do not feel it repeatedly, on passing the sound to the same part of the vesical cavity, it is likely to be small." 53.

The quotation is a long one, but the matter is too valuable to make us regret its transference to our pages. The young surgeon, and perhaps the old one, may usefully peruse the precepts of our author.

Mr. Crosse recommends the employment of auscultation as an useful assistant to the sound. He thinks that it is susceptible of much improvement, and likely to be turned to a good account.

The bladder requires to be examined when empty as well as when full, and during the act of voiding its contents an instrument introduced into it will sometimes detect a stone, incapable of being felt upon other occasions. Sir Everard Home was in the habit of recommending the use of the gum catheter, but Mr. Crosse appears to be averse to it, and prefers the instrument of silver. It should be used as a sound before the urine is drawn off, and again in the same manner after its evacuation. The catheter is useful also in determining whether the bladder is capable of emptying itself completely. And it is so important for the surgeon to know how much urine the organ can contain, and whether what it does contain can be totally expelled, that the use of the catheter is on this account desirable.

If the surgeon intends to operate with the straight staff, he must introduce previously a straight sound; but such an instrument can be expected only to detect a moveable stone resting at the neck, posterior part or fundus of the bladder, and is not suited for exploring the whole of the vesical cavity, nor capable of taking a great variety of movements.

Baron Heurteloup would seem to be the first who suggested what may be denominated *rotatory sounding;* effected by a sound with a very short curve, the part in the urethra being straight. Such a sound admits of being turned round upon its axis, when its curved end will describe a circle in the bladder, and pass behind the prostate gland, searching the *bas-fond* of this organ, which is just the part of its cavity least accessible, sometimes quite inaccessible, to the long curved sound. Mr. Crosse, however, repeats the natural and often urged objection, that neither a sound of this description nor a straight one is adapted for all cases, certainly not for those in which the prostate is enlarged. He is convinced that he has known serious and even fatal injury inflicted on this gland, by the lithotritist in his attempts to introduce a straight instrument into the bladder under such circumstances.

Mr. Crosse dwells forcibly on the paramount necessity of examination per anum, before the operation of lithotomy is undertaken.

> "In young patients," he observes, "we can feel through the rectum the whole outline of the bladder, and often tell the size and situation of the stone contained in it. In the adult, examining by the rectum enables you to detect a calculus in the membranes or prostatic portion of the urethra, or acquaints you with the size and condition of the prostate gland; and when the finger is long enough, you can tell the state of the bladder, as to tenderness on pressure, and thickness of its coats. Not unfrequently you can feel the stone by the rectum, balance its weight upon the finger, or tell its shape, its surface and situation. A good deal of tact is however required to profit by this mode of examining; in a child during violent screaming and straining, the coats of the bladder contracted so firmly on the contained urine, that it feels a tense body, shaped like a walnut; and no stone can be detected, till this state has subsided. In judging of the size of the stone, you must allow for the thickening of intervening parts, or when the bladder is much thickened you will estimate the stone to be larger than it really is. When the bladder contains a few ounces of urine, and the stone is not of considerable size, it gives so evasive an impression to the finger *in ano*, that much practise is required to profit by this examination

and to tell that you feel a stone; but where this foreign body is very large, it can always be felt by the rectum, unless there be a greatly enlarged prostate gland or other tumor interfering. In this method of exploring the bladder, the patient is placed horizontally on the back, or with the shoulders raised; but the surgeon has more command, and sometimes facilitates his object, by making the patient stand on a bed or table; if the bladder be empty, only gentle pressure with the finger should be made, as it will injure the lining membrane, particularly if the calculus be rough on the surface. I have known so much mischief arise from the undertaking of operations for stone without previously examining by the rectum, that I am induced to represent forcibly the propriety of doing it in every instance; I should deem myself as little justified in omitting this method of exploration, as in operating without having sounded at all." 55.

Such then are the precepts laid down by Mr. Crosse for exploring the bladder with the sound. Reversing his arrangement which is seldom very clear, and slightly condensing his remarks which, though free from diffuseness, are not couched in the simple and elegant style of one accustomed to literary composition, we may now turn our attention to some of the circumstances which interfere with the operation of sounding—sometimes requiring its execution to be delicate, sometimes rendering its indications false. We say to some of the circumstances of this description, for Mr. Crosse certainly does not mention all. But we have limited our task to that of analysis, and shall therefore do no more than follow our author. He confines himself to alluding to the presence of tumors in the bladder.

When these are present, particularly when of a vascular or malignant character, sounding is very deleterious; and such cases are attended by symptoms very like those of stone. In a patient whose bladder is represented in one of Mr. Crosse's plates, and where a vascular tumor, planted round the termination of the right ureter, projects extensively into the bladder, many soundings were practised, and always followed by great bleeding and an increase of the patient's sufferings. He lately had under his care a tall middle-aged man, suffering from such symptoms as a stone in the bladder would produce; he had become much emaciated in a few months, and almost daily lost some blood from the bladder, even when quiet and recumbent, and particularly after the use of the sound. Mr. Crosse was satisfied with three gentle and guarded examinations. He could detect no stone, and attributed the symptoms to a vascular tumor in the bladder.

Mr. Crosse occupies five pages with a case, the details of which he thinks it would be inexcusable to omit. The case itself is highly interesting, but a very brief space will permit us to present its principal features.

*Case.* Master C. was about one year and a half old when Mr. Crosse was first consulted respecting him. He had the symptoms of calculus in the bladder in a severe degree. Every two or three weeks Mr. Crosse gently employed the sound, and twice, he thought, but he was not satisfied, that he felt a stone; this was on each occasion on passing the sound towards the left side of the bladder. In consultation, another surgeon thought he felt a calculus. The child was sinking under the severity of his sufferings, and at the age of two years Mr. Crosse performed the operation of lithotomy. What happened he himself shall tell.

"The same experienced surgeon who had met me before in consultation, now gave his assistance, and stated again his opinion that he felt a stone; I stated I could not do so, although I introduced the sound, as well as the staff; but I felt a resisting body at the left side of the bladder, about the termination of the left ureter. I hesitated about proceeding further; after a few minutes delay, however, I determined to cut into the bladder, and re-introduced the staff for this purpose. I observed there was a great fulness of the perinæum; as soon as I cut down to the staff, and opened the membranous part of the urethra, a semi-transparent substance appeared in the wound, resembling the mucus which had been passed from the rectum by the child's straining when first placed upon the table, and I feared that I had, for the first time in my life, wounded the rectum! and the same impression, I afterwards learnt, momentarily pervaded the minds of the numerous bystanders This accident was not, however, sufficient to baffle me, nor to prevent my proceeding in the rest of the operation in which I was embarked. With the assistance of my left fore-finger, guided by the staff, I carried the scalpel forward fairly to the neck of the bladder, and on withdrawing the knife, I observed that the wound became instantly filled with a mass resembling on this sudden view, what one would have expected to see, had I opened the peritonæum and allowed the processus vermiformis and several folds of the small intestines to protrude; such was the momentary, frightful impression, that held the mute attention of myself and all who were present! I pushed back the protruded parts, carrying my left little finger into the bladder, where I could feel no stone, but found the cavity filled with soft tumors, with a firmer substance near the orifice of the left ureter. If I betrayed any judgment in the case, it was undoubtedly in this stage of the business, by relinquishing the forceps held in readiness for me, and withdrawing my finger from the bladder. The same parts then protruded, as on the bladder being first opened, and they proved on inspection to be tumors, connected together like a cluster of grapes, some more some less transparent, resembling in firmness, appearance and structure, the mild polypus nasi; the membrane by which they were connected with each other and with the inner surface of the bladder, was long and loose enough to allow some of the tumors to hang externally dependent at the wound, and I have no doubt that, by the violent straining efforts of the child, when first placed on the table, they had entered the urethra; this is indeed proved to have happened, by the tumors appearing in the wound the instant I bared the staff, and it accounts for the fulness of the perinæum which I noticed immediately before commencing the operation." 46.

The similarity of these tumors to the simple nasal polypi was evident, and Mr. Crosse endeavoured to remove them gently with scissors. But much remained in the bladder that he could not cut away. Great irritability of the bladder succeeded, the straining efforts were perpetual, and in forty-four hours after the operation the patient sank.

On examination after death, the bladder was found much thickened—at its fundus, there was a convex prominence covered by peritoneum, which, when cut into, was found to be a firm mass of thickened cellular substance, situated external to the muscular coat, and containing a small central cavity. The fatal disease, however, occupied the lining membrane of the bladder, which was loosely connected with the muscular coat, and very abundant so as to fall into folds, also thicker than usual, and having a gelatinous appearance. The cavity of the bladder was still occupied by tumors, growing from the lining membrane, and situated at the inferior part near its neck. One large tumor, with a broad basis, was firmer than the rest, and placed near the termination of the left ureter; this must have been the resisting body so generally felt on sounding. Several small detached tumors, from the size of a pea to that of a bean, were loose in the bladder. Towards the neck of the bladder the tumors had a different structure, and presented a wart-like surface; but all the tumors were covered with their proper membrane, continuous with the inner coat of the bladder, which was uninjured except in three or four spots, where Mr. Crosse had cut off the tumors with scissors. The neck of the bladder and prostatic portion of the urethra were much dilated, and the narrow basis, by which the tumors about the neck of the bladder hung, was sufficiently loose to allow them to descend into the prostatic and membranous parts of the urethra, which no doubt happened during life, causing the fulness of perinæum, and accounting for the foremost of the tumors prolapsing through the wound, as soon as the urethra was opened behind the bulb. The disease was exclusively seated in the mucous membrane, none of which was in a healthy condition, being loose, gelatinous, and thickened in all parts where polypous tumors did not arise, from the termination of the ureters to the fundus.

Mr. Crosse remarks that were it possible to ascertain beforehand the existence of *simple* polypous tumors in the bladder, an operation *might* usefully be performed for their removal. But he also owns that the diagnosis is attended with great difficulty, and he almost doubts the possibility of its being made with sufficient certainty to justify the surgeon in resorting to the extreme measure. On this subject he has collected the opinions and the practice of many surgeons which he embodies in a note. The note is not unworthy of attention, and we shall introduce it here.

"Callisen says," writes Mr. Crosse, "in reference to the *polypus vesicæ*, that the catheter, injections, &c. must be used,—'si vero, quod sæpissimè accidit, his resistat malum, ad incisionem colli vesicæ tumorisque sequentem irritationem, macerationem, ligaturam, evulsionem, prout rei indoles suaserit, indicatam recurrendum erit; quæ omnia sub ischuriæ et calculi vesicalis chirurgia uberius exponentur.' (*Systema Chirurgiæ Hodiernæ*, tom. ii. p. 190.) Le Cat invented an instrument for extirpating fungous excrescences of the bladder. (*Philosophical Transactions*, vol. xlvii. p. 29.) M. A. Petit of Lyons performed cystotomy, on a young woman, supposing there was a stone, other persons believing they felt one as well as himself; but it proved to be a polypous tumour of the bladder, and they agreed that nothing could be done; the patient lived a year afterwards, and Petit, on dissection, 'trouva dans la vessie, un polype du volume du poing, d'une forme pyramidale, et tenant par un pedicule extrêmement étroit.' The narrator of this case *Dictionnaire des Sciences Médicales*, *Article Polype*, tom. xliv. p. 233) says, that under such circumstances, with a polypus having a narrow neck, you should tie and extract it; but in every other case, he advises not to lithotomize, even though it be thought that a polypus is felt on sounding. Lassus (*Pathologie Chirurgicale*, tom. i. p. 522) has some good remarks on fungous tumours of the bladder, which he likens to polypi of the pituitary membrane, having a pedicle; but I suspect he has confounded with them tumours of the prostate gland, projecting into the bladder. Covillard (*Obs. Iatrochir*. p. 93) performed cystotomy for a tumour in the bladder, the size of a nut; 'je la mouchait avec les tenettes, ce que réussit de sorte qu'en moins de huit ou dix jours, la dite tumeur termina par suppuration;' and in a month the patient was convalescent. The most remarkable case of a tumour, growing from the inside of the bladder, and successfully extirpated, is related by Warner.—(*Philosophical Transactions*, A. D. 1790.)" 49.

## ON REMOVING VESICAL CALCULI THROUGH THE URETHRA.

It is probable that one of the greatest improvements which modern times have effected in the treatment of calculus disorders, is the application of the forceps to the removal of small stones from the bladder. Chemistry, by teaching us the composition and morbid alterations of the urine, and the labours of the lithotritists, by giving precision to the examination of the bladder, have enabled us to detect the existence of calculi when still of inconsiderable size. When detected, they may almost always be removed by a surgeon of moderate dexterity. We would impress upon our readers, in the most emphatic manner, the propriety, the necessity, of directing their attention to the early symptoms of stone in the bladder. Then is the time for surgery to interfere with safety and effect—then is the time for science to achieve its highest triumph, in displaying, by the combination of manual skill and elaborate knowledge, the arrest of a most painful and formidable malady. We repeat, that the surgeon is ignorant of his art, or careless in its practice, if he suffers the incipient symptoms of stone to elapse without examination of the bladder—if he permits a small calculus, which might be extracted, to grow into a large one which cannot. Lithotrity may be a very great improvement, but the extraction of calculi by the urethra is a greater —greater, indeed, by the ratio that almost certain prevention bears to a most uncertain cure.

Mr. Crosse observes well, that although, from dilatation of the ureters, calculi may descend into the bladder which are too large to pass through the urethra, this is the rare exception, not the rule. In general it may be stated, and it ought not for a moment to be forgotten, that every stone in the urinary bladder must at one period have been so small, that it might have been removed through the urethra. To a conscientious and well-informed surgeon, this reflection must be calculated to exert a strong influence upon his mind.

The object of the chapter on which we have entered is twofold: to point out, with as much precision as possible, the symptoms denoting the presence of small stones; and to offer some suggestions on the best mode of removing them after they are discovered. And first, then, of the symptoms.

1. Perhaps the best indication that can be obtained, of a calculus in the bladder being of small size, is to have traced it, not long before, passing through the ureter from one of the kidneys; but this source of information is rarely afforded, and the surgeon must trust to, and form his judgment upon, the reported duration of the symptoms, the preceding and present degree of their intensity, and the evidence derived from sounding the bladder. That evidence is thus stated by the observation of Mr. Crosse.

> "Where symptoms of stone have not existed above two or three months, or have been absent for a time and suddenly returned in a severe degree, producing itching at the end of the penis, frequent painful micturition, and occasional retention of urine, we may suspect that a small calculus is present in the bladder. With a small stone, the patient is often free from all inconvenience for a day or two, or even a week or two, and then is suddenly seized with retention of urine and most distressing pain, from the calculus entering the commencement of the urethra. In the interval between these sudden and acute attacks, the patient experiences only a slight itching at the end of the penis, irritation about the neck of the bladder, and a more frequent and sudden call to pass urine than is healthy.

On sounding at this early period, you will occasionally find such an audible click, or noise produced, when you strike the stone, as can be heard at a distance of several yards; and the evidence thus obtained, more audible than tangible, arising from a clear and sharp sound, I have experienced only when the stone is small." 58.

Mr. Crosse dwells strongly on the frequency with which a small calculus occasions retention of urine, a frequency so remarkable, that if a patient has retention without any very obvious cause, the surgeon should carefully endeavour to ascertain if a stone be not present in the bladder. In numerous instances of large vesical calculi requiring the operation of lithotomy, Mr. C. has learnt, by the previous history, that the patient had suffered sudden retention of urine at the time when the stone must have been small, and no doubt produced it, yet was not detected by the surgeon. Mr. Crosse relates a case, in which a patient was sent to him from a distance to undergo lithotomy. On sounding, Mr. C. ascertained, by attention to the circumstances so fully enumerated above, that the stone was of small dimensions. He introduced the urethro-vesical forceps constructed by Mr. Weiss, and readily removed a heart-shaped calculus, measuring one inch and three-quarters in its small circumference. The urethra was, of course, a capacious one.

But the surgeon must be satisfied that the stone is a small one, before he attempts its removal with the forceps. If too large to pass through the urethra, the attempts at extraction may be injurious, if not dangerous. In a case where persevering trials were made, the forceps continually slipping off the stone, on account of its being too large to be properly grasped by the instrument, or admitted to enter the urethra, such a severe degree of inflammation of the bladder ensued, as required most active antiphlogistic treatment to save the patient's life. To avoid such mistakes, Mr. Crosse points out the symptoms which determine the existence of a calculus too large to be removed by the urethra-forceps. If, then the symptoms have steadily persisted, in a severe degree, for six or eight months—if the concussion of walking or riding produce pain in the glans penis or occasionally render the urine bloody—if there be a burning heat at the end of the penis, continuing some time after each evacuation of the bladder—if, when the bladder is empty, pressure above the pubes give a shooting pain in the glans penis; or when urine occupies the bladder, if the patient, on turning in bed from one side to the other, feel something move in its cavity; or if change of posture from lying to standing, produce a sharp pain in the glans penis and neck of the bladder; if, in short, some or many of these symptoms be observed, but, more especially, if sounding comes to their support, by the dull noise occasioned, the firm resistance, and the extent of the surface touched; if these indications of a calculus of some size are elicited, the urethro-vesical forceps should on no account be introduced.

2. We may now suppose that the surgeon has been enabled to detect a small stone. His object is to remove it. Let us follow Mr. Crosse through his practical suggestions.

The situation of the stone, he says, suspected to be small enough for the use of such an instrument, should be first ascertained by a common sound, having the same length and curvature as the urethro-vesical forceps intended to be used; sometimes a bougie may be used to dilate the urethra or take off its irritability; and where there is any degree of stricture, it should be removed by proper treatment, as a preparatory step to the extraction of the calculus. He points out a disadvantage attending the common urethra-forceps—its allowing the urine to escape through the tube. The instrument should be so closely formed as to prevent the urine from running off in this manner. He suggests another improvement on the instrument, and thinks it may perhaps be better to have one blade longer than, and overlaping the other, which protects the mucous membrane of the bladder from the instrument, and equally prevents a small stone from slipping away, or from being fixed between the very extremity of the open blades.

"When the urethro-vesical forceps are introduced, they should not be made to project further into the cavity of the bladder than is necessary to feel the stone, before expanding the blades; if you project the instrument too far into the bladder, and the stone be small, it may lodge between the expanded blades, at too great a distance from their extremity, keeping the blades more expanded than is necessary, thereby creating difficulty, and inflicting pain, in the extraction, that might be avoided. If, on the other hand, the stone be held at the end of the blades, it will inevitably slip away when you attempt to bring it into the urethra. Feeling the stone at the extremity of the closed blades, you push these on a little, after expanding them, and endeavour to catch the calculus, being the position most advantageous for extracting it through the urethra." 60.

One quotation more, and we conclude this portion of the subject.

"If the stone, fairly grasped by the forceps, can be brought into the urethra, it will in general pass readily through the prostate portion of the canal, which offers the least resistance of any; and when it arrives in the membranous part, you may feel it *per anum* with the left fore-finger, and if of considerable size, you can press it forwards, supporting it and preventing it slipping from the grasp of the blades; if very large, you may not be able to bring it any further than the membranous part of the passage, in which case rather than make violent attempts to do so, you should extricate the forceps from it, and keeping the left fore-finger curved beyond it *in ano* press it forward in the perinæum, and cut upon it by the gripe or Celsian method, or by a lateral incision as in lithotomy. If the calculus can be brought into the spongy part of the urethra, it has escaped the resistance of the most powerful muscles and also of the triangular ligament, and can be carried on to the orifice; I have, however, been obliged to cut calculi out, not only at the perinæum, but just anterior to the scrotum, finding it impracticable to bring them further forward, on account of their size, or having allowed the forceps to slip off and being unable to re-apply them. Under some circumstances, where you cannot get the calculus further onward, you may be glad to push it again back into the bladder, reserving it for an early future trial; but where practicable, it is better to cut the calculus out at once. Sometimes a stone, which has been readily made to traverse the rest of the urethra, cannot be made to pass the narrower and firmer orifice; when difficulty is experienced in this situation, rather than persist in using great force, it will be proper either to crush the stone, or to make an incision for its exit just behind the external orifice, whereby the patient will be spared much pain." 61.

Mr. Crosse concludes by relating the particulars of an interesting case. The patient had enlarged prostate, and his symptoms induced Mr. Crosse to believe that there were several small stones. In the course of two or three weeks, Mr. C. removed seven calculi by means of the urethra-forceps. After this, he found another stone, and was able to drag it into the membranous part of the urethra, but no farther. Here he was compelled to cut upon it. He pressed it forward with his left fore-finger *in ano*, and made a semilunar incision in the perinæal side of the anus, cutting down to the stone, which was placed an inch and a half from the surface; with a small scoup, he extracted the stone through the wound. It was an inch in length, and $\frac{13}{16}$ of an inch in breadth. Feeling another stone still in the bladder, he brought it to the wound by the urethro-vesical forceps, removed it, and found it a little smaller than the last. "I have met (he adds at the conclusion of the case) with many instances in which calculi have been extracted through the urethra with this useful instrument, but no other in which so large a stone as just described, has been brought into the urethra and cut out thence by the perinæum, which is very preferable to cystotomy, because a less dangerous operation, and one that every surgeon should be prepared to try on a fitting occasion, where by careful investigation he is led to believe that the stone is of such a size as to render the attempt advisable."

## Of Lithotrity.

The operation of lithotrity, or breaking up the stone in the bladder, occupies the ninth, a short chapter of the work. Yet Mr. Crosse has evidently no extensive experience of the operation, and an admission in a note presents the sum of all he has to offer. He is so fully impressed with the efficacy and advantages of the operation, that in any adult male patient with a stone small, yet too large to admit of being extracted by the urethra, he would not feel justified in recommending the more dangerous operation of cystotomy for its removal, unless he failed in previous attempts to crush it in the bladder. This so perfectly accords with the experience and the practice of most judicious surgeons, that we need not dilate upon the subject. Yet Mr. Crosse details a case which may usefully be glanced at.

*Case.* Mr. Crosse successfully lithotomized a man aged sixty-nine years. The patient remained well for ten years, when another calculus was found in the bladder. The *lithotriteur* of Clavicle was used, and on a second trial a stone was grasped and reduced to fragments. For a few days, the symptoms of stone were absent, but they returned, and a stone could again be distinguished by the sound. "I repeated this examination (says our author) at the expiration of five weeks more, and observed 'that, on drawing the sound towards the pubes, I felt a calculus strike its concave aspect, causing a sharp sound, audible two or three yards off the patient, whilst, on jerking the sound towards the sacrum, I felt a calculus strike its convexity, giving a dull sound;' hence I entertained no doubt of there being two calculi of different sizes in the bladder." Before this examination, almost constant dribbling of the urine had come on, which persisted; rigors occurred, followed by parched tongue and feeble intermitting pulse; the abdomen became tumefied; and eighty days after the performance of lithotrity he died. One kidney was found to be healthy in appearance. The other presented the ordinary effects of long-continued suffering from vesical calculi—spurious hydatids in the cortical parts, dilatation of the pelvic cavity and infundibula; and absorption of much of the parenchymatous substance. The coats of the bladder were not much thickened, but on its cavity being exposed, a tumor, the size of a cherry, with a neck or narrowing at the basis, rose prominently from the left prostatic lobe into the bladder, and a similar tumor, much less prominent, was observed upon the corresponding part of the right lobe: these tumors were so placed as to be out of the way of the *lithotriteur.* Two calculi lay loose in the bladder, one weighing six drachms, the other one drachm and fifteen grains. In reference to these, Mr. Crosse observes—"they answered to the opinion I had formed at the last sounding, when the smaller stone, I have no doubt, lay on the pubic side of the instrument, giving the louder brisker sound, and the larger, giving a dull sound, rested towards the rectum."

## On Litho-Cystotomy, or Cutting into the Urinary Bladder for the Removal of a Calculus.

Mr. Crosse's own experience, and the practice of Mr. Martineau and of the Norwich Hospital which he has witnessed, must contribute to make surgeons attach some importance to his directions for the performance of this formidable operation. Yet he apologises, with more modesty than justice, for offering his sentiments and detailing his proceedings. He restricts his observations to the lateral operation, and points out the method of employing the curved and the straight staff. He feelingly insists on the necessity for caution in determining, or trying to determine, the size and characters of the stone, and in weighing the condition of the patient's health. On these points, however, we need not again touch, and we therefore proceed, without farther preface, to operate upon the patient. The following are Mr. Crosse's directions respecting the size and situation of the staff. The matter is of consequence, and the quotation rather long.

> "The curved staff ought to be large enough to fill the urethra, the largest that can be admitted without great difficulty; it should be long enough to project an inch or two into the bladder, and with a deep semicircular groove upon the whole of its convex, and an adjoining portion of its straight part. The handle should be rough, and as it requires to be suited to the operator rather than the patient, it should be large, so as to receive the thumb and two fingers. The operator, feeling the staff in contact with the stone, inclines its handle a little to the right, that the curve may present *in perinæo* on the left side of the raphé; and satisfied with its position, he commits it to his assistant or staff-holder.
>
> The staff-holder is the operator's main assistant, who should previously understand his views, and sympathize with him in every step of the operation. I have felt myself so dependant on such an assistant, that, preferring my fate to be in my own hands, I have sometimes wished to imitate Pouteau, by holding the staff for myself; but I have never undertaken to do so. This instrument must be held not forcibly, but lightly and as if suspended in air, since pressing it towards the sacrum to steady it, or pulling it towards the pubes, will equally tend to embarrass the operator and create mischief; it should be kept in the same relative position, in regard to the patient, as that in which it was received from the hands of the operator. Besides the danger of pressing the staff towards either the rectum or pubes, its holder, in endeavouring to make its convexity prominent in the perinæum, may cause its extremity to desert the bladder, so that it reach no deeper than the prostatic part of the urethra. By the unsteadiness of the patient, the staff may be moved irregularly from side to side, or backwards and forwards in the urethra, to prevent all this, the patient's pelvis must be kept

steady, and if it move, there must be a corresponding movement of the staff, that it may retain the same relative position in regard to the patient's body." 72.

The operation itself, consisting, as it essentially does, of three incisions, is described by Mr. Crosse. He particularly insists on a free external one, the advantages of which must be obvious, while it is not attended by any inconvenience whatsoever. The second or middle incision, to be made by the common scalpel, should be of much less extent than the outer incision, answering to its middle third and taking the same direction; it is intended to divide the superficial perinæal fascia, the posterior part of the accelerator urinæ, and the left transversalis muscle, baring the staff in the membranous part of the urethra, just behind the bulb. The left fore-finger is, therefore, employed to feel for the staff, and to press the rectum out of the way, in order that it may not be wounded. The third stage of the operation, that of cutting into the bladder with the scalpel, is attended with most difficulty. The operator has to cut through the levator ani, lay open the remaining portion of the membranous urethra, and make an oblique section, outwards and downwards, of the left lateral lobe of the prostate gland. This is done by passing the knife on in the groove of the staff, supported by the forefinger of the left hand, and by enlarging the section of these parts in the same direction, downwards and outwards, as the knife is withdrawn. On the curved staff, Mr. Crosse has found this portion of the operation very difficult, in consequence of the instrument being held obliquely to present the groove favourably, and of the curve causing the instrument to recede in two directions from the operator. So much, then, for litho-cystotomy with the curved staff.

"The straight staff is calculated to obviate many of these difficulties, and possesses strong recommendations for a preference. It will be found an advantage to have a second handle, at a right angle with the usual one; the handle on a line with the body of the instrument serving for the operator, and the other for the staff-holder, to whom I venture to affirm it will be found very convenient, enabling him readily to keep the staff in contact with the stone, and maintain it in a fixed position in relation to the patient. The staff thus constructed and held will follow every movement of the patient, without any tendency to displacement, so long as it is not suffered to go deeper into, nor to recede out of, the bladder.

In operating with the knife and straight staff, you execute the first and second stages of the incision as already described. The second handle is turned towards the right side, in order that the groove of the staff may be presented in the opposite direction; in doing this you find in the straight staff the great advantage of the instrument moving round its axis, and its position in the urethra consequently not altering from the median line, which I deem a very essential point. Although the urethra is naturally not straight, it readily yields so as to be made so, allowing a straight instrument to pass through it. The straight staff, in passing through the membranous part of the urethra, lifts it up from the rectum, pressing against the pubic or superior surface of the passage, thus affording great protection against wounding the rectum; the reverse happens with the curved staff, its convexity pressing towards the rectum, and rendering it not easy always to avoid wounding it. The greatest gain from the straight staff is in the facility given to the third stage of cutting into the bladder, by the instrument answering to the median line at the same time that its groove is presented in the most favourable position, and by your having to cut in a straight direction—so that getting down to the staff, you find this third stage converted into one plain continued incision, effected by carrying on the knife in the groove, as you would carry it along a common director, till satisfied that you have gone as deep as required, passing the prostate gland and just entering the bladder, you then enlarge the incision in withdrawing the scalpel." 74.

Mr. Crosse prefers the common scalpel to one with a more rounded end, as recommended by Mr. Key. He seems to hold the gorget in horror. In operating with the curved staff, Mr. Crosse advises, after the section of the bladder, the introduction of the blunt-beaked gorget as a conductor, and also as a dilator of the neck of the bladder. The finger, passed in upon the gorget, serves at the same time to distinguish the stone, and to dilate in some degree the neck of the bladder. But in operating with the straight staff, that is withdrawn as soon as the bladder is cut into, and before the finger is introduced by the wound—

> " The forceps you select should vary in size according to the estimated bulk of the stone and age of the patient; it is requisite to select such forceps as do not meet at the end of the blades; when the blades close, or nearly so, they are liable to catch hold of the coats of the bladder. The inner or concave surface of each blade should be rough, but not furnished with teeth, as I have seen some forceps; for long projecting teeth are so many wedges for breaking a calculus. when the blades are pressed hard upon it. Whether you introduce the forceps upon the blunt gorget as a conductor, or without the blunt gorget, unless the deep incision has been very free, which is not always desirable, the narrowness of the deepest part of the wound affords resistance, and the forceps enter the bladder with a jerk, giving an impression by which the experienced hand knows well that the blades of the forceps are fairly in the vesical cavity: and when you find the forceps are so situated, you open their blades, and sweep the cavity of the bladder with them, by giving a quarter-turn of the instrument on its axis. and on closing the blades after so proceeding, you will, in a majority of cases, having a loose stone of moderate size to deal with, find it within their grasp, particularly if the stone have been felt with the forefinger as directed, enabling you to judge of its size and situation, and giving you a knowledge where it is to be found. Should the stone not be thus felt and laid hold of, you next use the closed forceps as a sound, feeling for the stone in different directions, before you again open their blades; and thus you proceed with repeated trials, until fortunate enough to grasp the stone.
>
> When the curved forceps are required to be used, that you may be able to seize a stone placed at the *bas-fond* of the bladder, it will be found convenient to introduce them with the flat sides laterally directed, and the concavity towards the symphysis pubis, holding them at first nearly perpendicular, and bringing down the handles into a horizontal direction, as the blades pass under the arch of the os pubis; after the blades have thus reached the cavity of the bladder you give the instrument a half-turn, directing its extremity towards the rectum, where generally it is requisite to seek for the stone; it is in aged patients, and with the prostate enlarged, that the curved forceps are required, to enable the operator to get to a part of the vesical cavity, which he is generally unable to explore with the straight forceps." 76.

Mr. Crosse cautions the operator against employing force in the extraction of the stone. Force is said to be the instrument of the weak politician; it is certainly that of the bad lithotomist. If great resistance opposes the exit of the calculus from the bladder, Mr. Crosse observes, that the assistant receives the forceps, and, standing over the patient as in holding the staff, pulls them forwards, still grasping the stone as if to extract it, whilst the operator, with a curved probe-ended bistoury, cuts the resisting parts close to the stone, in the direction of the original wound, obliquely downwards and outwards, until relief is given. Sometimes he has known the resisting band felt upon the stone, on the side next the symphysis pubis; and the cut has, therefore, been made with the bistoury in that direction, or upwards. Mr. Crosse thinks it much better to enlarge the wound by a second cutting, at this part of the operation, when the size of the stone and the resistance met with prove the necessity for it, than to cut too freely at first, making a large deep wound (which is always dangerous), and securing a quick operation at the expense, perhaps, of security to the patient.

Even after the calculus has been brought into the wound, its removal is obstructed by too sparing a division of the levator ani muscle, or of the pubic ligament; or the forceps may slip off it. In either case, says Mr. C. after using the bistoury to enlarge the wound where resistance is found, you may pass the left forefinger into the rectum and curve it beyond the stone, supporting and pressing this forward, whilst with the rest of the same hand, you still assist the right in extracting the stone with the forceps.

Mr. Crosse observes in conclusion, and the observation should be carefully treasured up, that the quickest operators are not always most successful. Gentleness and precision are the principal requisites. Le Cat cut about half a dozen patients in twice as many minutes, and, it is said, lost nearly all of them. The final sentence is extremely just.

> "After all, it is far easier to lay down rules for litho-cystotomy, than to execute them. The failures in this operation happen too often from the surgeon not acting as he intended, and not happening to cut precisely the parts which, in a plan or lecture, he would advise to be cut: this is particularly the case in operating with the scalpel, and I have repeatedly had opportunities of observing that the knife has not been carried deep enough, the anterior part of the prostate gland only being divided, sometimes not even that—and the rest of that body and the neck of the bladder being dilated or torn for the entry of the forceps, and still further injured in the forcible removal of the stone." 78.

## ON THE TREATMENT REQUIRED AFTER LITHO-CYSTOTOMY.

This is rather, perhaps, a chapter on the mode in which death occurs after lithotomy, or, as Mr. Crosse will have it, after litho-cystotomy, than absolutely a dissertation on the treatment generally required after the operation.

The ordinary management of an ordinary case need not surely occupy us. Mr. Crosse does not approve of leaving a canula in the wound and bladder, as a general rule. But if, in a few hours after the operation, the urine does not flow freely through the wound, and if the patient experiences uneasiness in the region of the bladder, which is felt distended above the os pubis, the finger ought to be introduced through the wound as a guide for a gum-elastic or silver female catheter, which may, indeed must, remain for some time. Mr. Crosse touches, and cautiously touches, on the employment of pressure to accelerate the healing of the perinæal wound, as soon as the urine flows freely through the penis. Yet this question, he thinks, is so made up of particular exceptions, that he rather refers to individual cases, than ventures to offer any decided general directions.

He successively reviews, as causes of death, or sources of danger after lithotomy, inflammation of the bladder—infiltration of urine into the cellular tissue, and diffuse inflammation of it—peritonitis, conjoined with the latter, and separate—and, finally, nervous exhaustion. He concludes the chapter by a few observations on tardy cicatrization or a fistulous condition of the perinæal wound—on wound of the rectum during the operation—and on fistulous opening into the gut.

1. Inflammation of the bladder, he remarks, seldom arises after lithocystotomy, that organ being satisfied to have gotten rid of its offending inmate; the surgeon should however take care that it is not present when he undertakes the operation; and when it is detected, after the operation, by the acute pains in the viscus and tenderness on pressure upon it, active local and general antiphlogistic treatment should be adopted. In a case of this kind, which proved fatal, unattended by peritonæal inflammation, vomiting came on in addition to tension and great tenderness above the pubes, and the bladder on dissection was found particularly vascular and red in its inner membrane.

2. Diffuse inflammation of the cellular tissue of the pelvis, and abdomen, that is of its posterior region, is admitted by Mr. Crosse as the most frequent cause of death after the operation. Yet we think that he should have done Sir Benjamin Brodie the justice to allude to the fact, the unquestionable fact, that it is he who has earnestly, we had almost said exclusively, pointed out this important circumstance. Prior to the publication of that admirable surgeons observations on the diseases of the urinary organs, the common occurrence of peritonitis after lithotomy, and the consequent necessity for active antiphlogistic treatment, were generally insisted on in books and lectures. The accurate observations of Sir Benjamin Brodie first and chiefly tended to dispel this vital and serious error. We do not think we need dwell any further upon this affection, as our readers will find in former numbers of this Journal the detailed remarks of Sir Benjamin Brodie, and a series of cases which occurred at St. George's Hospital, reported by ourselves for the purpose of illustrating the characters of the disease.

2. Diffuse inflammation of the cellular tissue seldom proves fatal, seldom, perhaps, attains any considerable height without inducing some inflammation of the peritoneum. Yet that inflammation is sometimes indistinguishable, generally slight, and, even when severe, a secondary consequence.

It is doubtful if peritonitis ever occurs entirely independent of cellular inflammation. However this may be, it constitutes in some instances (the weak minority) the predominating affection, and may for practical purposes be considered as a distinct result of the operation. Modern observations have proved that as such it is not frequent.

The treatment of the two diseases is essentially different. For the first, active depletion appears to be injurious; for the second it is indispensably required. The surgeon should recollect that diffuse inflammation very often induces peritonitis, and probably local depletion is generally serviceable, both in the way of prevention and of cure. Our experience is in some degree opposed to that of Mr. Crosse in one respect. He says children are rarely sufferers from diffuse cellular inflammation. We have seen them not unfrequently die of it. We grant indeed that more or less inflammation of the peritoneum was present in every, or almost every instance. But the cellular inflammation was the most extensive, primary, and most essential malady.

3. Nervous exhaustion, unconnected with loss of blood, or with any well marked morbid condition of the tissues, is another cause of death after

lithotomy. A tympanitic state of abdomen, says our author, with a feeble and easily compressed pulse, supervenes in adults, particularly in the aged, a few days after the operation, unaccompanied by pain, or the signs of peritonitis. Opiates are indicated, with good nutriment, sometimes administered by lavement, where the stomach is disinclined to receive it, and even stimulants are required; but bleed and blister in such a case, or omit to supply nutriment and stimulus, and the patient will have no chance of living. Danger is always to be apprehended, when such symptoms of nervous debility arise; but he has known recovery from the treatment recommended, where the abdomen was tympanitically distended, the pulse intermitting, and a troublesome hiccough present for some days.

Hæmorrhage after lithotomy is a fifth cause of death. But to this Mr. Crosse dedicates a separate, the last, chapter.

Mr. Crosse takes no notice of another, and a fatal consequence of the operation, though indeed it may occur independently of its performance—we allude to formation of circumscribed abscess in the pelvis. This not unfrequently occurs, and in general proves fatal. For a history of the affection, and some cases in which it was presented, we refer to the report from St. George's Hospital, to which we have already alluded.

5. The perineal wound sometimes heals slowly. Now, whenever a wound of any sort heals slowly, or shows a disposition not to heal at all, the philosophic surgeon either suspects that something is wrong in the general health, or something exists in the part itself to keep up irritation and prevent a cure. Perhaps there are few affections in which a rational treatment is more serviceable than in cases of fistulous wounds. One will not heal because there is a foreign body irritating it—another because a diseased structure is connected with it—a third, because a muscle is pulling on it—a fourth, because some fluid, as the urine or saliva, is flowing through it —in short, the causes of absence of cicatrization are numerous, and the judgment of the surgeon is displayed in the investigation of the circumstances and appreciation of the one that is present in the individual case. The following are the remarks of Mr. Crosse on the subject of perineal fistula. Before we quote them, and as the only further commentary we shall make upon them, we repeat that the surgeon will display his judgment by minutely observing, or endeavouring to observe, what it is in the case immediately before him which seems to interfere with the healing process. Having thus discovered what is wrong, he must endeavour to set that right.

"The perinæal opening is often slow to heal after the operation, and one cause of it, I have found to be the feeble and reduced state of the patient, who with a lapse of a little more time, generous diet, and fresh air, has recruited in bulk and spirits, and quickly recovered. If the wound be patulous and a granulating surface present, a gum-elastic catheter may be introduced by the urethra and retained there; the urine passing through it and no longer by the wound, allows the latter to close. But there is much room for consideration before such a practice is adopted, and it is always pregnant with the one objection of expanding the urethra at the part where the wound is situated, and so far interfering with its cicatrizing. I do not consider the urine passing through the wound as the cause of its not healing, and advise the surgeon to look for some other. If, on the urine passing, there be pain, and matter escape from the wound, there is an unhealed cavity at the neck of the bladder, and it would be in vain to close the outward opening by pressure: and if the gum-elastic catheter be introduced into the bladder, and left in the urethra, great care must be observed in so doing, lets it get into the urinous cavity instead of the vesical.

When the perinæal opening is become very narrow, and is truly fistulous, by being lined with a cuticular membrane, if there be no sign of a larger and deeper cavity at the neck of the bladder, caustic may be applied to the fistulous orifice, the *argenti nitras*, or nitric acid; and if still unsuccessful, you should employ the actual cautery. It is however in vain, and therefore improper, to have recourse to these measures, unless, by observing the discharges from the opening, and examining by the probe, you have satisfied yourself, that there is no larger cavity at the neck of the bladder." 84.

6. Mr. Crosse has once only wounded the rectum. He has seen it wounded frequently, and so have we. The wound produced by the knife is constantly situated just above the sphincter ani, communicating with the membranous part of the urethra, and unless very small, the fæces, when soft, pass through it; and the urine passes into the rectum, of whatever size the opening. The rectum is so contiguous to the urethra, that an opening may occur subsequent to the operation, from sloughing resulting from violence, or from ulceration in a bad constitution.

When the wound is small, and the urine finds a free passage by the perinæal opening, healing will sometimes occur spontaneously, the motions being kept solid and purging avoided. Mr. Crosse once knew the wound of the rectum heal spontaneously a year and three-quarters after the operation; in this case the perineal wound had closed early, a recto-urethral fistula only remaining. To treat this, its disclosure by means of the speculum ani, the paring of its edges, the application of the suture, or the use of lunar caustic, nitric acid, or the actual cautery, are familiar, and if the fistula is small, are sometimes not unsuccessful remedies. In one case, Mr. Crosse divided the sphincter ani also.

"Where the perinæal opening also remains, forming a recto-perinæo-urethral fistula, dividing the verge of the anus, by an incision including the parts between the two openings, has been recommended; I once succeeded by this method; in another case the perinæal opening only was closed by it, the communication between the rectum and urethra remaining. In a third case, a very emaciated subject, the parts all healed ultimately, after this procedure, on the health improving by country air, and generous diet, so as to restore the wonted bulk and powers of the system." 84.

Mr. Crosse concludes by observing of wound of the rectum, that it disposes to a relapse of stone in the bladder. "This is so true (he says,) that few with a recto-urethral fistula after the litho-cystotomy escape a relapse; and when the operation is repeated for the second stone, it has cured the fistula left by the first. I have seen more than one such case, and read of many; whence we derive the suggestion of making an incision, similar to that of litho-cystotomy, to cure the ancient fistula." 85.

## On Hæmorrhage after Lithotomy.

This is a long chapter on an important subject. Hæmorrhage after any operation is formidable, not so much, perhaps, from the mere amount of the loss of blood, as from the disposition to many bad consequences, partly produced by the bleeding itself, partly resulting from the means required for its arrest. We have seen, of course, many instances of hæmorrhage after lithotomy. Too many of the cases ultimately ended ill—some from diffuse cellular inflammation—some from circumscribed abscess of the pelvis.

As Mr. Crosse observes, the causes of bleeding after the operation are various and cannot always be avoided.

> "A very narrow pelvis and contracted perinæum will bring danger of wounding arteries of considerable size, in making an incision of proper extent and in the most eligible direction; or arterial branches, such as are of small size usually, and such as cannot be avoided, may be so enlarged, in particular cases, as to furnish an alarming bleeding; an unusual distribution of the arterial trunks about the neck of the bladder is a third source of hæmorrhage for which the surgeon should be prepared. But the supervention of hæmorrhage, after litho-cystotomy, most often depends on the incisions into the bladder not being practised exactly where intended by the operator and directed by the anatomist, whence vessels are wounded which are always large and regular in their distribution, and which ought to have been avoided. I can say little of hæmorrhage from particular diathesis of the patient, having never known a case of this kind; still it may no doubt occur, as we find it happening after other less serious operations, in those persons, the quality of whose blood and defective living powers of whose vessels, prevent the closure and stopping of the smallest divided arterial branch." 86.

Hæmorrhage may either be venous or arterial. The former being usually the slightest, may be first disposed of. It is not very unfrequent, and may generally be arrested when the operation is completed by moderate pressure and the recumbent posture. But in aged calculous patients the veins about the bladder, prostate gland, and rectum, are often very varicose; and in a feeble system, an abundant loss of venous blood, with some arterial, may prove fatal. In a gentleman much troubled with hæmorrhoids, on whom Mr. Crosse operated in his seventy-seventh year, removing two large calculi weighing nearly three ounces and a half, there occurred profuse loss of venous blood, with little of arterial, whilst he was on the table; bleeding, principally venous, continued after he was placed in bed, till at length Mr. C. introduced a gum-elastic canula, and round it plugged the wound with lint. The patient was already faint, and lay with a scarcely perceptible pulse for three or four hours. Cordials were freely given, and recovery took place.

Arterial hæmorrhage next occupies the attention of our author. He divides it into three varieties—as it occurs in the first, in the second, or in the third stage of the operation.

1. Hæmorrhage in the first stage, that is, in the performance of the first incision, arises from vessels in the adipose substance. The pressure of an assistant is generally sufficient to arrest it. But in a very feeble, or a very old patient, the vessel may be advantageously or necessarily tied.

2. Hæmorrhage in the second stage is of more consequence, and requires more elaborate consideration.

> "As the left transversalis muscle must be divided, when an arterial branch of considerable size runs in the direction of it, the knife will unavoidably cut it across; but usually, although blood squirts, no trouble is occasioned, and the

surgeon may proceed to finish the operation: the necessity of securing such a vessel must be determined by the quantity of arterial bleeding going on after the patient is in bed. A little bleeding in patients of good stamina should not excite alarm; I have known often from half a pint to a pint of coagulated blood on the sheet when first drawn, after the patient has been some time placed in bed, and no harm ensue. A moderate bleeding in strong plethoric subjects is indeed a great security against subsequent inflammation. It is the quick escape of fluid arterial blood from the wound, its being renewed instantly when removed by the sponge, and this occurring a few hours after the operation, that should be regarded as indicating a degree of hæmorrhage requiring the surgeon's interference for arresting it." 88.

If the hæmorrhage be rapid and alarming, the wound should be exposed in a good light, spatulæ employed to keep it open, and small sponges fixed upon a stick used to clean and clear its interior. With these precautions a ligature may be applied upon the bleeding vessel. But if it is impossible to distinguish the vessel or secure it, it is necessary to resort to plugging the wound. The plan adopted by Mr. Crosse is apparently of French extraction—the introduction of dossils of lint round a canula. A gum-elastic canula, he says, may be introduced into the bladder through the wound, and the latter be plugged up with dossils of lint, placed around the canula, beginning as deep as where the bleeding arises, and accumulating the dossils till they are on a level with the perinæum. Yet he properly insists on avoiding this coarse operation if possible. Whenever it is employed, he acknowledges that apprehensions of the final result must be felt, and that some untoward symptoms too constantly intervene. The bleeding may be arrested; that is not the danger. But the parts are irritated, the flow of urine is prevented, the natural progress of the actions of reparation is disturbed, and, as Mr. Crosse observes, inflammation of the cellular texture and peritonitis are liable to supervene. It is in cases where hæmorrhage has occurred, and the wound has in consequence been much disturbed, that we have mostly seen circumscribed abscess of the pelvis. Mr. Crosse relates a case illustrative of the indirect seriousness of hæmorrhage, and of the means required to control it.

*Case.* "In an aged gentleman, from whom I removed four calculi, by cystotomy after the lateral method, there was a brisk stream of arterial blood furnished from the wound, two hours after he had been placed in bed; and as I could not, on exposing the wound and turning out the coagula, detect the bleeding orifice for the application of a ligature, I stopped the hæmorrhage by pressing, for a quarter of an hour, the left internal pudic artery against the ramus of the ischium. I then introduced a gum-elastic tube by the wound into the bladder, (drawing off four or five ounces of dark urine,) and inserted dossils of lint, supporting the perinæum by a T bandage. The bleeding did not recur, and the patient went on seemingly well for a day or two, the urine flowing freely through the canula; but three days afterwards, the body became tympanitically distended, without pain or tenderness on pressure, and the pulse very feeble. Hot fomentations were applied, good animal broths and diluted wine also given, notwithstanding which the patient died eight days after the operation. Dissection proved the absence of peritonæal or other inflammation, as well as of urinary infiltration and suppuration. The whole of the colon, more especially its caput, was immensely distended with air; the stomach and small intestines were only moderately distended; to the most prominent part of the over-distended caput coli, the omentum was attached by recently effused lymph, and on being separated, a distinct round hole, the size of a split pea, was exposed in the coats of the bowel, through which fetid air escaped; this opening had been produced by sloughing or ulceration, so that the contents of the bowel were only prevented from escaping into the peritoneal cavity, by the adhering omentum. The inner surface of the colon, near this part, exhibited several ulcerated spots." 89.

Hæmorrhage from the arteries of the bulb is occasionally witnessed. Two vessels of some size, one on either side, enter the corpus spongiosum at this part. The left branch is naturally wounded most frequently, and the bleeding is considerable. The vessel may be seen and should be tied. In one case, mentioned by our author, where a troublesome arterial bleeding occurred at the bulb, it was stayed by compressing the right internal pudic artery on the ramus of the ischium, which was found practicable through the wound; hence it seemed that the operator had wounded the artery of the bulb on that side, whilst the left branch had escaped.

Although the operator *should* cut into the membranous part of the urethra, he not very unfrequently *does* open the bulb. Mr. Crosse has often seen this done where the wound was made too high, the surgeon going directly down to the staff where he could readily feel it. The wounded corpus spongiosum is secured by pressure and dry lint, and does not furnish an alarming bleeding, if the arterial branch be not divided before entering the bulb.

Mr. Crosse notices, almost par parenthèse, the peculiarities of hæmorrhage in children. He makes two short remarks and adds one longer case. The remarks are these;—that young children rarely bleed much, the contractile powers of the vessels being great; but that when they do bleed, the hæmorrhage is badly borne. A slight one long continued may induce fatal syncope. The case is pregnant with instruction.

*Case.* A healthy boy, four years old, was lithotomized by the lateral method, with the scalpel, and curved staff, and a small calculus removed with sufficient expedition. An hour and a half after the operation, the patient was cheerful, comfortable, and with cheeks florid as in health; an ounce or two of coagulated blood were on the draw-sheet at the first remove. In five hours, the responsible attendant on the spot, an intelligent surgeon, communicated that there was some bleeding going on, with swelled perinæum and rather pallid cheeks; but he took no alarm. Mr. Crosse proceeded to the house, but before he arrived the surgeon on the spot had been summoned up stairs by the nurse and found the child just dead. Mr. Crosse describes and exhibits a drawing of the parts. The bulb was wounded, and the left arterial branch entering it was wounded also. The fatal bleeding had been going on slowly, Mr. Crosse believes, between six and seven hours. He justly hints that the surgeon's carelessness was blameable. Had alarm been taken, the wound might have been exposed and the open artery secured by ligature; even pressure might have proved adequate to arrest the bleeding; or had a little stimulus, as well as nourishment, been given at the critical time, when the exhaustion induced had proved just sufficient to stop the bleeding, the powers of the system might have rallied and life been restored.

Having thus briefly noticed some circumstances connected with hæmorrhage in children, Mr. Crosse returns to the accident in adults. He points out the advantage and success in many cases attendant on pressure of the internal pudic artery against the ramus of the ischium. Such pressure may be kept up for several hours.

The internal pudic artery itself may be wounded in the third stage of cutting into the bladder. The hæmorrhage is of course of a formidable character, and must be speedily arrested. Mr. Crosse is convinced that no other means than a direct ligature will answer. Where the artery is divided quite across, a ligature above and below the division will be required to command the bleeding. He deems the internal pudic artery to be always accessible to a ligature, by means of a small curved needle, describing the third of a circle an inch or rather more in diameter, where the external wound is ample. A note contains a reference to three cases in which the pudic artery was tied. It is brief, and we shall introduce it.

"Dorsey (*Elements of Surgery*, vol. ii. p. 190, 3d edition.) gives a case in which Dr. Physic wounded the pudic artery with the gorget, and tied it with a ligature and curved tenaculum; he also recommends a small curved needle, held by a pair of forceps. Mr. Abernethy mentions having tied the wounded pudic artery in the same situation as we compress it to stop the hæmorrhage. (*London Med. and Phys. Journal*, vol. ix. p. 393). An interesting paper, on hæmorrhage after lithotomy, is inserted in vol. iii. p. 292 of the *Quarterly Journal of Foreign Medicine and Surgery*. In a patient, æt. 57, bleeding went on till the pulse became imperceptible; the wounded pudic artery then tied and a cure in thirty-three days. *Castéra Diss. sur les Accidens qui compliquent la Taille*, p. 48)." 92.

Mr. Crosse adds a case in which he tied the artery without success. All facts connected with hæmorrhage after lithotomy are interesting. We will not therefore pass this by.

*Case.* "In the case of a gentleman, sixty-two years of age, of very irritable habit, there was a great arterial hæmorrhage, so that I calculated that a pint and a half of arterial blood was lost, in the delay of extracting several calculi, before the ligature was applied. The situation of the bleeding vessel was near the left ramus of pubis and ischium, half an inch from the commencement of the *erector penis*, which muscle was clearly exposed; the blood flowed from a tube nearly as big as a crow's quill. Having made a very large external incision, I had no difficulty in seeing the spot whence the blood issued. I inserted a small tenaculum into the spot, and tied a ligature upon the part so held, when the bleeding immediately ceased and did not return. On the evening of the following day there was vomiting and hiccough, and the abdomen was prominent and distended with air, more especially in the region of the stomach and arch of the colon; there was neither pain, however, nor tenderness on pressure. The hiccough continued, the vomiting ceased, and urine flowed well through the wound; but the tongue became parched, pulse rapid and feeble, and death ensued five days after the operation. There was no inflammation of either peritonæum or any other structure, nor infiltration of urine, and I could only account for the fatal result, by the loss of blood, and the shock of the operation upon the nervous system of a most sensitive and irritable patient. The bladder and its appendages are represented in plate xxv. shewing the left internal pudic artery opened, but not cut across, on the aspect nearest to the wound, which accounts for a single ligature, applied by the aid of a tenaculum, stopping the bleeding. A divided artery of this size would require a ligature upon each orifice." 92.

Sometimes the internal pudic artery must be tied, not for a wound of the vessel itself, but of some arterial branch at a distance. Of course, if the bleeding orifice can be secured, that must be done.

*Case.* A man, aged 56, was in such bad health, that Mr. Crosse was prevented for a few weeks from attempting the operation. When he performed it, the prostate gland and neck of the bladder were divided by the scalpel. One superficial artery bled, and in consequence of the feeble condition of the patient, Mr. Crosse secured it with a ligature. A stone, weighing nearly half an ounce was extracted. Within an hour, and before he left him, there was arterial bleeding to the amount of ten ounces, proceeding from the deepest visible part of the wound when he opened it to the utmost. He plugged the wound, but the bleeding continued, and at the expiration of three hours, the patient was cold, pallid, and exhausted, with a small and most rapid pulse, above one hundred and thirty in a minute. The bleeding orifice was not accessible, and arterial blood still flowed briskly, he opened the wound freely, cleared the bladder of coagulum by passing in his finger and the scoop, and then succeeded in putting a ligature on the left internal pudic artery, where it lies on the inner surface of the ramus of ossa pubis and ischii, by means of a small and very curved needle; the bleeding was instantly stopped and did not return. In the evening, the pulse were one hundred and twenty; there was sickness but no vomiting, and the urine flowed scantily by the wound. Next day the abdomen was tympanitic, and the distension was such as to occasion dyspnœa; there was also a constant desire to pass a motion, without an evacuation actually occurring. Cathartic pills, warm fomentations, and a glyster were the means employed by Mr. Crosse. The symptoms became favourable. On the fifth day, the superficial ligature separated—on the ninth, that on the pudic came away—on the tenth day, all the urine passed by the penis, and the perinæal wound uninterruptedly healed.

3. When an arterial branch is wounded in the third stage of the operation, and is situated deeper than the levator ani, either just on the inner surface of this muscle, or even on the face of the prostate gland, the orifice is probably quite inaccessible to the view, and a direct ligature cannot be applied. It will be right, says our author, to compress the left internal pudic artery, and observe if the bleeding be restrained by your so doing; but commonly an artery, thus deeply situated, does not branch off from the internal pudic, beyond the spot where the pressure is made; it may have quite a different course and another origin; and if the bleeding be, therefore, not restrained by pressing the internal pudic against the ramus of ischium and pubis, it would be in vain to put a ligature upon this vessel, and the only remaining resource is pressure in the deep part of the wound.

"When the bleeding has this deep origin, plugging the wound with lint around a hollow canula may be attended with bad consequences. You may stop the bleeding through the wound, but, the plugs not being driven deep enough, and not applied directly upon the bleeding orifice, the hæmorrhage continues and the blood gets into the bladder, which is known to happen, first by the state of the patient, who suffers from the loss—secondly by pain and distention of the bladder, and by fluid arterial blood flowing through the penis or through the canula. The blood may coagulate in the bladder, and if accumulated in large quantity, although the hæmorrhage cease, an embarrassing state of things is present, the urine not being allowed to flow through the canala. A syringe connected with the outer orifice of the canula, acting powerfully, will draw the coagulated blood through it, and clear the bladder; but in doing this, there is risk of the bleeding being reproduced. To make pressure in the deep part of the wound, under the state of things now considered, a hollow canula armed with compressed sponge may be introduced into the bladder, when the sponge expanding from moisture, will act upon the surfaces required to be compressed; but all pressure, in such a deep situation in the pelvis, brings danger and makes a serious case, creating apprehension of collateral bad effects—infiltration of urine, diffuse inflammation and suppuration: the fortunate circumstance is, that the cases requiring it are rare, particularly those arising from an extraordinary distribution of arteries at the neck of the bladder. It not unfrequently happens that some degree of bleeding takes place into the bladder; the urine, tinged as it flows, shews this; sometimes the bleeding is considerable, and yet there may be no ground for alarm, nor any alarm entertained. I knew a gentleman evacuate from the bladder a coagulum of five or six ounces of blood, through the wound, six days after the operation, with great straining and pain, after the manner of a woman in labour, and afterwards all went on well." 94.

Mr. Crosse does not feel inclined to imagine that hæmorrhage from the divided prostate gland, or from the injured lining membrane of the bladder, can ever prove serious from its amount, or make it necessary to consider formally the means of treatment.

Old writers on lithotomy talk of secondary hæmorrhage, occurring a week or two after the operation. This must prove the violence done in its performance. If no hæmorrhage occurs in the first six or eight hours, modern surgeons entertain little dread of its subsequent appearance. In two or three instances only has Mr. Crosse known bleeding to a considerable extent take place between a week and twelve days from the operation; one occurred in a little boy four years old, and all did well without the surgeon's interference. To open, as he remarks, the partly healed and greatly diminished wound, with the neighbouring soft parts swollen, tender, and inflamed, is impracticable at such a period; and so little chance is there of seeing the orifice of a bleeding vessel, that the surgeon is limited to making pressure in the wound.

Mr. Crosse concludes by the following short passage, equally apologetic for his essay and his practice. Yet neither requires an apology, for the former displays his industry, information, and candour, and the latter is at once the evidence and the reward of his ability.

"In summing up," he says, "this essay, at the close of the last of its chapters, I need not, I trust, explain the motives which have led me to state, so honestly and freely, whatever of untoward occurrences have happened, either in my own actual practice, or in the proceedings of others under my observation. To boast of uniform success in any capital operation, is not the dignified course of a surgeon, any more than that the physician should quack of universal cures. Experience in lithotomy, like victory in battle, is seldom gained without counting a certain number of slain." 95.

We are sure Mr. Crosse's list of killed and wounded is but small. Ninety-five pages of the volume are consumed in the matter of which we have given, not merely an epitome, but almost an impression. The reader of a journal must surely be more satisfied at finding himself the possessor of the substance of a valuable volume, than at reading some pert criticisms, imperfect commentaries, and inferior jokes. The one is useful knowledge—the other idle and ephemeral trash.

The succeeding forty pages are occupied with the description of twenty-nine coloured lithographic plates. Those plates are principally devoted to the delineation of preparations in the possession of Mr. Crosse. The execution is respectable—the representation, we may presume, is accurate—and the study of the plates will repay the time and attention of the surgeon.

Three Appendices conclude the volume. The first, consisting of thirty pages, is occupied with twenty-two cases; the second with ten tables, constructed with labour, and no doubt with accuracy. In order to render our view of the present volume complete, we shall insert the majority of the tables here, and in our clinical department we shall fully notice the more interesting cases.

The third appendix must have cost the author most extraordinary labour. It is a catalogue of the express treatises upon gravel, stone, and lithotomy, published in different ages and countries, and of essays or notices referring to those subjects in many periodical works. This catalogue is for reference, and forms an imposing monument of the industry of Mr. Crosse.

## TABLES SHEWING THE RESULTS OF OPERATIONS, CHIEFLY PERFORMED AT THE NORFOLK AND NORWICH HOSPITAL.

These tables are constructed from the collection in the hospital. From the first opening of the institution, so Mr. Crosse tells us, to the present period, embracing above sixty years, all urinary calculi, removed from the human bladder by operation, whether on male or female patients, have been preserved and are now contained in a cabinet, arranged in numerical and chronological order, with an inscription to each, distinguishing the name of the operator, the name and age of the patient, the weight of the calculus removed, the day and year of the operation, and the date of the patient's discharge as cured, or of his death, where the result was unfavourable.

The first table contains a list of the calculi preserved in the cabinets of the hospital. The number appears to be seven hundred and four. The age of the patient—the result—the length of time intervening between it and the performance of the operation—and the weight of the stone are told. The number of females operated on is thirty-five. This table is too long for insertion here.

The other tables are analyses of the preceding, containing the most important averages, details, and deductions. These we shall insert.

### "TABLE II.

The seven hundred and four cases of litho-cystotomy, specified in table 1, are here arranged so as to shew the number of cured and of fatal cases, and the proportion of the one to the other, with a distinction of male and female.

| MALE. | | | FEMALE. | | | TOTAL. | | |
|---|---|---|---|---|---|---|---|---|
| OPERAT. | CURED. | DIED. | OPERAT. | CURED. | DIED. | OPERAT. | CURED. | DIED. |
| 669 | 578 | 91 | 35 | 33 | 2 | 704 | 611 | 93 |
| 1 in $7\frac{32}{91}$ | | | 1 in $17\frac{1}{2}$ | | | 1 in $7\frac{53}{93}$ | | |

## TABLE III.

Seven hundred and four cases of litho-cystotomy, according to the list in the collection of calculi at the Norfolk and Norwich Hospital, and as shewn in table 1, arranged in decennial periods as to age, with a distinction of the numbers cured or ending fatally.

| Years. | 1 to 10 | | 11 to 20 | | 21 to 30 | | 31 to 40 | | 41 to 50 | | 51 to 60 | | 61 to70 | | 71 to80 | | TOTAL. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Result. | C | D | C | D | C | D | C | D | C | D | C | D | C | D | C | D | C | D |
| Numb. | 262 | 19 | 97 | 9 | 43 | 5 | 45 | 5 | 37 | 10 | 71 | 25 | 50 | 20 | 6 | 2 | 611 | 93 |
| Propor. | 1 in $14\frac{15}{19}$ | | 1 in $11\frac{7}{8}$ | | 1 in $9\frac{3}{5}$ | | 1 in 16 | | 1 in $4\frac{7}{10}$ | | 1 in $3\frac{21}{25}$ | | 1 in $3\frac{1}{2}$ | | 1 in 4 | | 1 in $7\frac{58}{93}$ | |

## TABLE IV.

Seven hundred and four calculi preserved in the cabinet of the Norfolk and Norwich Hospital, arranged according to their weight in ounces, with distinction of the result of the operations performed for their removal.

| 1 oz. & un- | | 1 to 2 oz. | | 2 to 3 oz. | | 3 to 4 oz. | | 4 to 5 oz. | | 5 to 6 oz. | | 6 to 7 oz. | | 7 to 8 oz. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | D | C | D | C | D | C | D | C | D | C | D | C | D | C | D |
| 482 | 47 | 101 | 18 | 19 | 16 | 4 | 7 | 2 | 3 | 2 | 0 | 0 | 2 | 1* | 0 |

* This calculus, marked No. 37 in table 1, and weighing just eight ounces, I have reason to believe was contained in the scrotum, and the case, therefore, cannot be regarded as a successful example of regular cystotomy.

## TABLE V.

Five hundred and twenty-nine calculi, removed by cystotomy, weighing *one ounce or under*, taken from the first division of the preceding table, and arranged according to their weight in drachms, with the result as to the cure or death of the patient. Forty-seven out of the number being fatal cases, the proportion of deaths is *one* in about *eleven and a quarter*.

| 1 dr. & un- | | 1 to 2 dr. | | 2 to 3 dr. | | 3 to 4 dr. | | 4 to 5 dr. | | 5 to 6 dr. | | 6 to 7 dr. | | 7 to 8 dr. | | TOTAL. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | D | C | D | C | D | C | D | C | D | C | D | C | D | C | D | C | D |
| 122 | 12 | 101 | 10 | 90 | 5 | 60 | 8 | 28 | 1 | 35 | 3 | 21 | 3 | 25 | 5 | 482 | 47 |

## TABLE VI.

A list of one hundred cases of death after litho-cystotomy in males, shewing the age in years of each patient, the weight of the calculi, and the interval after the operation at which the fatal event ensued. The first ninety-one patients of this list are taken from table 1, the rest are supplied from my notes, being cases which I witnessed, or in which I operated in private practice. In eighty-four out of the hundred cases there was a solitary calculus; in seven cases there were *two* calculi, in six there were *three*, in two there were *four*, and in a single instance *five*.

| No. | Age. | WT. OF CAL. | INTERV. | No. | Age. | WT. OF CAL. | INTERV. | No. | Age. | WT. OF CAL. | INTERV. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 | 8 grains. | 12 days | 35 | 62 | 1 ounce | 22 days | 69 | 50 | 7 drms 20 grs | 2 days |
| 2 | 45 | 1 oz. 4 drms. | 7 days | 36 | 5 | 30 grains | 2 days | 70 | 16 | 6 drms 30 grs | 29 days |
| 3 | 61 | 2 ounces | 107 days | 37 | 49 | 6 drachms | 18 days | 71 | 66 | 1 oz. 5 drms. | 4 days |
| 4 | 59 | 2 oz. 4 drms. | 91 days | 38 | 40 | 2 oz. 4 drms. | 5 days | 72 | 5 | 4 drms 20 grs | 10 days |
| 5 | 68 | 5 ounces | 15 days | 39 | 2 | 1 drachm | 17 days | 73 | 52 | 3 ounces | 18 days |
| 6 | 45 | 1 oz. 1 drm. | 21 days | 40 | 14 | 10 grains. | 25 days | 74 | 66 | 4 drachms | 20 days |
| 7 | 8 | 1 oz. 2 drms. | 11 days | 41 | 51 | 3 drms 30 grs | 6 days | 75 | 62 | 3 ounces | 3 days |
| 8 | 26 | 2 oz. 4 drms. | 18 days | 42 | 61 | 1 oz. 5 drms. | 28 days | 76 | 70 | 2 oz. 4 drms. | 6 days |
| 9 | 3 | 1 drachm | 1 day | 43 | 59 | 2 oz. 3 drms. | 31 days | 77 | 40 | 3 drachms | 14 days |
| 10 | 29 | 3 drachms | 51 days | 44 | 57 | 6 drms 30 grs | 40 days | 78 | 64 | 1 drm 2 scrps | 32 days |
| 11 | 3 | 20 grains | 23 days | 45 | 17 | 2 oz. 3 drms. | 23 days | 79 | 65 | 2 ounces | 5 days |
| 12 | 50 | 4 oz. 4 drms. | 2 days | 46 | 7 | 4 drachms | 89 days | 80 | 51 | 1 drm. 30 grs. | 29 days |
| 13 | 42 | 2 oz. 4 drms. | 2 days | 47 | 25 | 2 oz. 4 drms. | 17 days | 81 | 63 | 1 oz. 6 drms. | 4 days |
| 14 | 54 | 2 oz. 4 drms. | 25 days | 48 | 46 | 2 drachms | 2 days | 82 | 47 | 1 drm. 20 grs. | 20 days |
| 15 | 54 | 3 oz. 4 drms. | 41 days | 49 | 51 | 2 ounces | 1 day | 83 | 65 | 6 oz. 4 drms. | 3 days |
| 16 | 59 | 2 oz. 4 drms. | 49 days | 50 | 5 | 3 drms 30 grs | 15 days | 84 | 60 | 1 drm. 36 grs. | 6 days |
| 17 | 67 | 4 oz. 4 drms. | 4 days | 51 | 60 | 3 ounces | 66 days | 85 | 4 | 1 drachm | 21 days |
| 18 | 66 | 3 drachms | 13 days | 52 | 4 | 1 drm 40 grs. | 4 days | 86 | 64 | 3 oz. 6½ drms | 4 days |
| 19 | 12 | 1 oz. 4 drms. | 5 days | 53 | 71 | 1 ounce | 2 days | 87 | 4 | 12 grains | 7 hours |
| 20 | 60 | 3 ounces | 21 days | 54 | 4 | 10 grains | 2 days | 88 | 68 | 1 oz. 1 drm. | 12 days |
| 21 | 60 | 1 ounce | 2 days | 55 | 67 | 1 oz. 6 drms. | 23 days | 89 | 75 | 3½ oz 2 scrps. | 8 days |
| 22 | 57 | 4 ounces | 3 days | 56 | 5 | 3 drachms | 16 days | 90 | 3 | 1 drachm | 20 days |
| 23 | 40 | 2 ounces | 11 days | 57 | 50 | 3 oz. 4 drms. | 4 days | 91 | 51 | 6 drms 24 grs | 10 days |
| 24 | 19 | 1 ounce | 19 days | 58 | 22 | 6 drachms | 6 days | 92 | 43 | 13 ounces | 4 hours |
| 25 | 51 | 1 oz. 2 drms. | 12 days | 59 | 57 | 4 drachms | 2 days | 93 | 68 | 5 drms 20 grs | 4 days |
| 26 | 61 | 2 drachms | 10 days | 60 | 59 | 3 drms 30 grs | 7 days | 94 | 56 | 6 drms 40 grs | 13 days |
| 27 | 54 | 2 drachms | 6 days | 61 | 53 | 1 oz. 2 drms. | 7 days | 95 | 65 | 1 oz. 2½ drms | 7 days |
| 28 | 70 | 3 ounces | 8 days | 62 | 8 | 46 grains | same day | 96 | 67 | 1 oz. 3½ drms | 36 hours |
| 29 | 57 | 2 ounces | 6 days | 63 | 3 | 40 grains | same day | 97 | 62 | 1 oz. 1½ drm. | 5 days |
| 30 | 30 | 7 ounces | same day | 64 | 67 | 1 drm. 30 grs. | 15 days | 98 | 69 | 2 oz. 50 grs. | 37 days |
| 31 | 45 | 4 drachms | 17 days | 65 | 16 | 6 drachms | 5 days | 99 | 72 | 5 drachms | 8 days |
| 32 | 16 | 1 oz. 2 drms. | 13 days | 66 | 3 | 4 drachms | 1 day | 100 | 55 | 3 drms 20 grs | 7 days |
| 33 | 15 | 1 oz. 5 drms. | 13 days | 67 | 54 | 4 ounces | 2 days | | | | |
| 34 | 53 | 2 oz. 2 drms. | 6 days | 68 | 9 | 2 drms 50 grs | 1 day | | | | |

## TABLE VII.

The calculi in one hundred fatal cases of litho-cystotomy, as in the preceding table, arranged according to their weight in ounces.

| 1 oz. & un. | 1 to 2 oz. | 2 to 3 oz. | 3 to 4 oz. | 4 to 5 oz. | 5 to 6 oz. | 6 to 7 oz. | above 7 oz. |
|---|---|---|---|---|---|---|---|
| 50 | 22 | 17 | 5 | 3 | 0 | 2 | 1 |

## TABLE VIII.

Twelve cases of males who underwent litho-cystotomy a second time, shewing the age *in years* of each patient at the time of his being first operated on, the interval *in months* between the first and second operation, and the weight of the calculi removed. Two of the patients (No. 9 and 11) died from the second operation, the rest recovered; one patient (No. 3) had stone a third time, and was deemed unfit for the operation.

| No. | Age at 1st Operation. | Interval between 1st and 2d Operation. | *Weight of Calculi.* 1st Operat. | 2d Operat. | *Observations.* |
|---|---|---|---|---|---|
| 1 | 15 | 16 months | ʒij. | ʒiij. | Three calculi removed at the first operation, broken into many fragments. |
| 2 | 48 | 12 months | ʒiij. | ʒv. | One flat lithic acid calculus first removed, entire; the calculus removed by the second operation is of the same composition. |
| 3 | 63 | 32 months | ʒiv. | ʒiij. | One flat lithic-acid calculus at first operation, unbroken |
| 4 | 26 | 12 months | — | ʒiv. | Weight of the first stone unknown; both rectal and perinæl fistulæ from the first operation, which were cured by the second. |
| 5 | 8 | 17 months | ʒij. ℈j. | ʒivss. | One entire calculus at first operation, which left a recto-urethral fistula. |
| 6 | 3½ | 24 months | ʒiiss. | ʒij. ℈ij. | The first calculus removed entire. |
| 7 | 2½ | 15 months | ℈iiss. | ʒj. | The first calculus alkaline, and broken into many fragments in the extraction. |
| 8 | 3 | 14 months | ℈j. | ʒiiss. | Two small calculi of oxalate of lime removed by the first operation. |
| 9 | 65 | 130 months | ℥iss. | ℥ij. | The first stone entire; the second was an oval stone, composed principally of lithic-acid. |
| 10 | 18 | 8 months | ʒvj. | ʒivss. | The first stone was entire with an alkaline exterior. |
| 11 | 46 | 12 months | ʒxss. | ʒj. ℈j. | The rectum wounded in the first operation, and a recto-urethral fistula present when the second was performed. |
| 12 | 7 | 24 months | ʒiss. | ℈ij. | The first operation was perfect, and a firm entire globular calculus removed. |

Here we close our account of the present volume. That it evinces the patience, the labour, and the zeal of Mr. Crosse must be evident. Its principal merit is connected with the operation of lithotomy, and the pathological alterations of the urinary organs. The chemistry, and what may be denominated the medical surgery of those organs, is left comparatively unnoticed and unimproved. It is a work which all hospital surgeons will possess—indeed, which all surgeons who wish to be well acquainted with their profession should. The copiousness of our notice is sufficient evidence of our practical estimate of its deserts, and we wish the author all the fame and profit which he merits, no inconsiderable store.

## MEDICO-CHIRURGICAL TRANSACTIONS. Vol. XVIII.

### 1. ON IRRITATION OF THE SPINAL CORD AND ITS NERVES, IN CONNEXION WITH DISEASE IN THE KIDNEYS. By EDWARD STANLEY, F.R.S., &c.

WE owe an apology to the distinguished author of this paper, for neglecting to notice it at an earlier period than this. If, indeed we were disposed to review books and papers according to the new and fashionable recipe adopted by many critics—namely, by appending to each book a few lines of tart censure or honied praise, we could spread a catalogue of critiques each quarter before our readers, much more extensive than the catalogue of ships, and chiefs, and armies sent to the Trojan war by the Greeks of old. But this is not our custom. We present our subscribers with solid dishes—not soufflets, soup-maigres, or eau-sucrès, that fill the intellectual stomach with flatus, or tickle the palate without satisfying the appetite.

In this paper, Mr. Stanley relates cases of disease of the kidneys, co-existing with spinal tenderness and paraplegiac affections—which cases were treated as diseases of the fibro-cartilages and bodies of the vertebræ themselves.

The first case that attracted his attention was that of a man in Bartholomew's admitted for paraplegia and retention of urine. Sensation and motion were both lost in the lower limbs. On examination, there was tenderness of the spine at the third lumbar vertebra, and this seemed to indicate the existence of disease, and, consequently, issues were inserted. Considerable amendment followed, with a certain degree of restoration, both of sensation and motion. The retention of urine, however, changed into incontinence. Here the improvement ceased—the general health failed—and he died.

On dissection, no disease could be discovered in the containing or contained parts of the vertebral column—all being perfectly sound, as were the brain and its membranes. In one kidney were numerous small abscesses—the other was gorged with blood and softened in texture. The mucous lining of the ureter and bladder was very vascular, and the muscular coat of the latter was thickened.

The next case occurred in 1821, in a man aged 35, admitted on account of partial loss of power, both in the upper and lower extremities, of a month's standing, and supposed to originate in disease of the cervical vertebræ. He suffered from irritation in the bladder, and occasional inability to expel the urine, which contained a puriform fluid. His health gradually declined, and he died six weeks after admission into Bartholomew's. On examination, both kidneys were found gorged with blood. In the substance of one, there were small purulent depôts. The muscular coat of the bladder was thickened, and its lining membrane very vascular. No morbid appearance in the brain or spinal cord—nor in the vertebræ.

The third case was communicated to Mr. Stanley by Mr. Hunt, of Dartmouth. A gentleman, aged 28, fell upon his back and bruised it, but soon recovered. Some weeks afterwards he was chilled, after being violently heated. On the following night, he was seized with a severe pain in the loins, partially relieved by bleeding. Some pain continued, and he began to lose sensation and motion in the lower limbs. The pain in the back was increased by pressure, but was not influenced by the application of a hot sponge. He gradually lost all motion and feeling in his limbs, together with the power of retaining his urine, and in this condition he died.

"On examination of the body, one kidney was found to consist of a mere sac distended with pus, and in the other kidney, were several small abscesses. There was no disease in the spine, or in any other part of the body." 263.

The fourth case was furnished by the late Mr. Horwood, of Gosport.

"The patient having suffered a fall upon his back which was followed by paralysis of the lower limbs, his complaint was, in consequence, considered to be disease of the spine, and the appropriate treatment was adopted and continued to the time of his death.

The appearances on dissection were, abscesses in both kidneys, thickening of the coats of the bladder, with enlargement of the prostate gland. The thoracic and abdominal viscera were healthy. The brain and spinal cord were healthy excepting an unusual vascularity in the membranes of the latter below the first lumbar vertebra. There had not been the slightest suspicion of disease in the kidney, the pain in the back having been wholly referred to the disease which was supposed to exist in the spine.

Here were four cases considered to be diseases of the spine, and treated accordingly, in which the vertebræ, their fibro-cartilages and ligaments were found healthy, and the only disease ascertained to exist was seated in the kidney, with which, therefore, we are to presume the irritation of the spinal cord was connected. To the question whether the irritation of the spinal cord might have been an independent affection with which the disease in the kidney was casually coincident, the proper reply will be presently considered." 264.

Mr. Burnett, house-surgeon of Bartholomew's drew up the particulars of the fifth case. A man, aged 22 years, was admitted for retention of urine, the consequence of a severe gonorrhœa, stopped by injections. The bladder then lost its expulsive power—the sphincter ani became paralytic—partial paralysis of the lower extremities. Complained of severe pain in the back, about the fifth lumbar vertebra. His countenance was flushed and anxious—tongue furred—pulse 120—abdomen tense and tender, especially in the hypogastric region—and he distinctly traced the course of his pain from the bladder upwards to the left kidney, then across his loins to the right kidney. He soon lost power and feeling in the lower extremities. The urine dribbled away, and the fæces passed involuntarily. The urine drawn off from the bladder was dark-coloured and offensive, containing mucus. Various remedies were used, with little or no effect. He died about a fortnight after entering the hospital.

"On examination of the body, the kidneys were found larger than natural, and of a very soft consistence. Sections of them discovered, with the turgescence of the bloodvessels, numerous minute depositions of pus throughout both the cortical and tubular parts. The infundibula and pelves were filled with pus mixed with a thick, ropy mucus. The mucous membrane lining the bladder was very vascular, and in part covered by coagulable lymph. There was no morbid appearance discoverable in any part of the brain or spinal cord." 266.

In the above, as in the four other cases, there was nephritis, with paralysis of the lower extremities; but the symptoms were less equivocal, and the disease of kidney could scarcely be overlooked.

In the course of May, 1833, the following case occurred in St. Bartholomew's under the care of Mr. Earle. A man, aged 30, was admitted for gonorrhœa and phymosis. The discharge continued, though the inflammation had subsided. In this state, and without any apparent cause, he was seized with paraplegia, from the umbilicus downwards. The functions of the brain were undisturbed. He stated that he had been suffering for a day or two from pain in the loins. Cupping and purgation gave no relief. The urine flowed involuntarily. A catheter was introduced, and brought away three pints of urine. In sixteen hours from the commencement of the attack, he suddenly fell back in his bed and died.

"With the recollection of the case last related, I ventured to predict that in this instance, we should find inflammation in the kidneys. The spinal cord was first carefully examined. There was found some turgescence of the vessels, both in the membranes and substance of its lumbar portion, and a few drachms of transparent fluid in the theca, but neither the turgescence of vessels, nor the effusion of fluid were sufficient to explain the paraplegia by pressure on the cord. The liver was enlarged and indurated. The other abdominal viscera, with the exception of the kidneys, were sound, and with no unusual turgescence of the vessels. Both kidneys were of so dark a colour as to be almost black; they were remarkably flaccid, and on sections being made of them, were found to be in every part gorged with blood. The mucous lining of the infundibula and pelves was dark-coloured from the turgescence of the vessels. The coats of the ureters and the mucous lining of the bladder were also very much more loaded with vessels than is usual. In the bladder was about a pint of urine. Some fluid was found between the membranes of the brain and in its ventricles.

When the circumstances of the foregoing case are viewed with the other cases which preceded it, it seems reasonable to believe there was a connexion between the occurrence of the paraplegia, and the inflammatory state of the kidneys evidenced by the great determination of blood to their substance. Had life endured for a longer period, it is probable there would have been suppuration in the kidneys. From the period of the occurrence of the paraplegia there was an inordinate secretion of urine, which is worthy of remark in connexion with the great determination of blood to the kidneys." 268.

Dr. Burrows furnished our author with some particulars of a case that occurred in the same hospital under the care of Dr. Latham. A man, aged 35, was admitted with incontinence of urine and severe pain in the back, which had existed for two years. The pain extended from the first dorsal to the last lumbar vertebra, being most severe at the sixth dorsal vertebra, and increased by pressure. There was pain over the front of the chest, and dyspnœa. Urine and fæces passed involuntarily—pulse 80. Abstraction of blood proved of no use, except to the dyspnœa. He gradually sunk. A considerable quantity of serum was found beneath the arachnoid in the head, as also in the theca vertebralis; and the pia mater covering the lumbar portion of the spinal cord was very vascular. In other respects the cord was healthy, as were the thoracic and abdominal viscera, with the exception of the kidneys. The pelvis and infundibula of the right one were dilated and distended by a thin puriform fluid, and, in some situations, the substance of the kidney had been absorbed, so that the infundibula extended almost to its outer surface. the rest of the substance of the kidney presented a mottled appearance from alternation of white and red spots. The other kidney shewed a similar appearance. The bladder contained a pint of thin, puriform fluid, and its mucous lining was thickened.

"In subsequent communications with which I have been favoured from Mr. Henry Hunt of Dartmouth, he states that he had attended four cases of disease in the kidney existing in connexion with symptoms of affection of the spine, and that 'the peculiarities of these cases appear to him to be, first, that the symptoms simulate those of the incipient stage of inflammation of the vertebræ, thus there are the numbness, cramps, and inability of commanding the legs. 2dly, that there is a peculiar feeling of tight wires or cords in different directions through the limbs. 3dly, that with the first stage of the inflammatory attack in the kidney, the urine is not altered in quantity or quality, and consequently it was pronounced that no disease in the kidney existed until it was indicated by the mixture of pus with the urine." Mr. Hunt further alludes to the occurrence of cases of disordered uterus combined with loss of power in the lower limbs in such a degree, that the patients were wholly confined to their beds, adding that, by the subsequent and perfect recovery of some of these patients, it was clearly proved there had been no charge of structure in the parts to which the symptoms referred as the source of irritation." 270.

It can hardly be supposed that the disease in the kidney and irritation of the spinal cord, in all these cases, were purely coincidences, and unconnected as cause and effect. In the foregoing cases it seems probable that the disease commenced in the kidney, and extended to the medulla spinalis and its nerves afterwards. The reverse of this is a catenation every day observed—namely, irritation of the spinal cord being communicated to the kidneys and other parts of the urinary apparatus.

"The lumbar ganglia of the sympathetic communicate freely with the spinal nerves, and from these ganglia, nerves issue to the renal plexus. From this arrangement of nerves, an explanation may be derived of the influence of the spinal cord upon the functions of the kidney: still more closely can we trace the influence of the spinal cord upon the bladder, rectum, and uterus, through the nerves which these organs receive directly from the sacral plexus of spinal nerves." 272.

Dr. Prout informs us, that in a large proportion of cases, the deposition of the earthy phosphates from the urine, has been traced to injuries of the spine, from concussion or falls. It is well known that the more serious injuries, as fracture or dislocation of the spine, frequently prove fatal by inducing inflammation of the mucous lining of the bladder, or rather by producing the cause of that inflammation—ammoniacal urine. Our author thinks that the irritable uterus described by Dr. Gooch is, in many instances, dependent on irritation of the spinal nerves; for we see great benefit, in such cases, from issues in the loins. The following interesting case of irritable bladder we shall extract.

"Charlotte Sepping, æt. 25, was admitted into St. Bartholomew's Hospital with the following symptoms. Pain and tenderness in the side just above the crista of the ilium. Urine very scanty and high coloured, and voided with great distress. She stated that she had been ill about a month, and that at the beginning of her illness, after straining to empty the bladder, she felt a sensation of something giving way in her side, and immediately passed a teacupfull of blood. She had occasionally passed gravel. She suffered most severely from pain in the bladder, and required the constant introduction of the catheter. From the suspicion there might be a stone in the bladder, she was sounded by Mr. Abernethy, who pronounced there was no stone, but that the bladder was very irritable, and without the power of contracting. Every form of medicine that was likely to relieve the irritability of the bladder was tried, but ineffectually; her sufferings continued, the pain in the bladder was excessive, there was also severe pain in the lower part of the back, and the urine continued to be mixed with clots of blood. On examining the spine, acute tenderness was discovered in the spinous processes of the lower lumbar vertebræ, and an issue was accordingly made in this situation. As soon as the discharge from the issue commenced, her sufferings began to subside, the bladder became gradually tranquil, and in about a month, she left the hospital perfectly well, and it was afterwards ascertained that she had no return of the complaint." 277.

Mr. Stanley enters into some physiological speculations respecting the mode in which the irritation is propagated from the kidney or bladder to spinal nerves, and through them to parts where both sense and motion are lost or impaired. Some experiments of Mr. Mayo are referred to, and then he remarks.

"In the instances which have been adduced, irritation, commencing in the nerves of an internal organ, the kidney or bladder, has been transmitted through the spinal cord to the motive and sentient nerves of the limbs; but the same phenomena may occur in an opposite order, as in the case of a compound fracture or other severe injury of the lower extremity followed by retention of urine, from irritation arising in the anterior crural and ischiatic nerves, and communicated through the lumbar and sacral plexuses of spinal nerves to the nerves of the bladder. Extending these views to cases of neuralgia, where there is no visible derangement of structure, or other local cause of excitement, it will always be difficult to determine whether the source of irritation be in the affected nerves, or in the central portion of the nervous system whence they are derived. In one case of neuralgia affecting the nerves of the thigh, after ten years of severe suffering, the patient died, and upon dissection, with a perfectly healthy condition of every other organ, the lumbar portion of the spinal cord on its posterior surface, was found covered with numerous large, but thin plates of cartilaginous substance, deposited in the arachnoid membrane. Here it must be, I conceive, difficult to state whether the morbid condition of the spinal cord bore the relation of cause or effect to the painful affection of the nerves of the thigh." 279.

This paper, "which is simply intended to illustrate, by a variety of facts, the reciprocal connexion between the kidneys and the spinal cord," is creditable to Mr. Stanley, and cannot fail to attract the attention of practitioners to a very important train of investigation.

## II. ON MALIGNANT TUMORS CONNECTED WITH THE HEART AND LUNGS. By JOHN SIMS, M.D. Physician to St. Mary-le-bone Infirmary.

Four cases are detailed by Dr. Sims, in whose talent for observation, and accuracy of narrative, we place the greatest dependence. The growth of morbid or malignant tumors in various tissues of the body, has occupied much attention of late years; but few cases are recorded where the heart was involved in the diseased process. The first two cases in this paper belong to that class of tumors denominated fungoid, medullary, soft cancer, &c. and present some interesting circumstances.

*Case* 1. This was a complicated and distressing case. A female, aged 23, had enjoyed good health till the commencement of the present disease. Recently she complained of dyspnœa, cough, pain in the chest, and symptoms supposed to indicate inflammatory action, which did not, however, give way to the usual remedies. She mentioned to Dr. S. a swelling in the lower part of the abdomen, and, on examination, several distinct and large tumors could be felt rising out of the pelvis. "Above the clavicle, and along the blood-vessels of the right side of the neck, there was a number of enlarged lymphatic glands." Her disease made a rapid progress—fluid collected in the cavity of the peritoneum—the tumors rose higher and enlarged—the limbs became œdematous—the dyspnœa augmented, as did the cough, but without expectoration.

> "A remarkable symptom now occurred: the sounds of the ventricles were perceived in their usual situation, but the impulse of one or both ventricles was equally distinct over a considerable part of the right side of the thorax anteriorly. Her right arm became painful and enormously swoln, presenting all the signs of phlegmasia dolens from inflamed veins." 283.

The sacrum sloughed, and death terminated her sufferings.

*Dissection.* The head was not examined.

> "*Thorax.*—On opening the thorax, a tumour of very considerable size was found imbedded in the right lung, it was closely attached to the great vessels at the base of the heart; it was moveable within the thorax.
>
> On making sections through it, some portions appeared firm and fibrous, and others softer and brain-like. Its colour was of a dirty white, intermixed with streaks of a lead colour, apparently in the direction of its few blood-vessels. It closely involved the bronchi and blood-vessels at the root of the right lung, and was firmly attached to the pericardium and vessels immediately issuing from the heart. Circumstances did not allow me to remove the tumour.
>
> Nothing remarkable was observed in the left lung or the texture of the heart.
>
> On dissecting out the right subclavian vein, the preparation of which is now before the society, it was found to be filled with successive layers of fibrine, the product of inflammation, and the valves at its junction with the jugular are seen distended with this deposit.
>
> The cavity of the peritoneum contained several pints of fluid. The viscera had a deep leaden hue, and there was a remarkably strong exhalation of carburetted hydrogen gas. There were several very large tumours attached to the uterus and its appendages, some of them the size of large oranges; they were soft, and their texture was exactly analogous to the tumour found in the lung." 285.

We beg to draw the attention of our readers to the following passage.

> "I need not relate the various means that were used to mitigate the sufferings of this young person. I may however remark, that needle punctures, made along the inner side of the upper extremity, *materially relieved the pain and nearly reduced the swelling:* for, as will be shewn, this was a true specimen of phlegmasia dolens, and I am not aware that this remedy is had recourse to in the analogous affection of puerperal women." 284.

Now, with all due deference to Dr. Sims, we beg to enter our caveat against the statement that this was a "true specimen of phlegmasia dolens." It was a case, undoubtedly, of phlebitis and its consequence, œdema—but very different from the comparatively rare disease described under the name of phlegmasia dolens. In the *latter* the swelling is tense and elastic. The part pressed by the finger quickly rises to its accustomed level—and the fluid will *not* drain off by any number of punctures made by the needle. All the disputes that have arisen respecting the pathology of the disease, have been occasioned by confounding the more common malady—phlebitis—with the more rare one—phlegmasia dolens. For one case of the *latter* we have witnessed more than ten of the *former.* They may easily be distinguished from each other. The swelling in one case is elastic, in the other œdematous. The phlebitis is very dangerous and often fatal—phlegmasia dolens is hardly ever fatal. No wonder then that the pathology of the one should be unknown, and that of the other so well ascertained by multiplied dissections.

In the above case, the impulse communicated from the heart along the tumor was curious, and might have readily led to false diagnosis, had not auscultation lent its assistance.

*Case* 2. This was a malignant tumor affecting the right lung, and penetrating to the left auricle of the heart. John Imber, aged 43, a baker, applied to Dr. S. twelve months ago, for an attack of hæmoptysis, attended with symptoms indicating a loaded state of the thoracic vessels. He had several subsequent attacks, which were relieved by general and local bleeding, digitalis, blisters, and the usual means. Dr. S. then lost sight of him for several months. He was admitted into the infirmary on the 30th Oct.; meanwhile, his symptoms had undergone a material change for the worse. He had had several attacks of hæmoptysis—the dyspnœa was augmented—cough troublesome, with mucous expectoration. There was dulness on percussion over a considerable portion of the right side of the thorax anteriorly, and respiration was inaudible there. The jugulars were dilated to three times their size, and, with the subclavians, presented large tumors above the clavicles—face swollen—severe headache—pulse sharp. Bleeding, blisters, counter-irritation, &c. afforded some relief, but it was transient. He lingered, however, till the 28th December, when he died. The dissection is very minutely detailed, but we must pass over much of it.

> " *Thorax.*—On raising the anterior parietes of the thorax, a portion of the tumour, several inches in circumference, came into view on the right side. The tumours of the right lung occupied about two-thirds of the capacity of the entire thorax. The diaphragm was lower than usual, the space for the left lung was encroached upon by the contents of the opposite side. The heart was situated several inches lower than usual, and pushed much beyond the mesial line.
>
> The contents of the thorax, the liver, and diaphragm were now removed from the body.
>
> *Left Lung.*—The left lung was free from adhesion, and the pleura of natural appearance; there was much black matter deposited, and some emphysema. This lung was considerably indurated in some parts, which, on being cut into, consisted of extensive red hepatization. On a careful examination of the lung, it was found to be quite free from the morbid growth contained in the other cavity of the thorax: the larger vessels and the bronchi were not engaged in the disease, although the tumours in the left auricle lay close to them.
>
> *Right Lung.*—Pleura much thickened. This lung occupied a considerable space, for the augmented contents of the thorax had encroached upon the cavity of the abdomen. A great proportion of it was consolidated, apparently in consequence of old hepatization; in some parts the substance crumbled on the application of gentle pressure, this portion was of a dark or dusky red colour; there was pus in a few small cavities in the section. A small portion was comparatively healthy, and in degree fit for the purposes of respiration. The tumour

was extensively attached to this lung, and portions had insinuated themselves between the larger vessels and the carnifications of the bronchi.

The *trachea* was so pressed upon by the tumour as to render the musculo-membranous part quite flat, and to expand the cartilages into a much wider arch. The bronchi, at the bifurcation, were much dilated; the right bronchus, with several of its subdivisions, passed directly through the tumour." 289.

The pericardium was much dilated at the base, by several large tumors developed within it. A tumor pressed upon the right auricle, so as to burst it inwards. The cavity was much dilated. The descending cava was much increased in length, and passed through the tumor. The cavity of the right ventricle was contracted. The right branch of the pulmonary artery passed through the tumor, and was much dilated. In the left auricle, the tumor had made much progresss—the substance of the auricle being absorbed to a considerable extent. The left ventricle was small. The tumor occupied about one-third of the thoracic cavity, extending from the anterior to the posterior parietes, being formed of several lobes of various sizes—attached to the trachea, bronchi, heart, great vessels, and right lung. It had no capsule, but was merely covered by a thin membrane, except where it was attached to circumjacent viscera. Its consistence was various—some parts resembling soft cartilage—others scirrhus—some soft and pulpy, &c. and often containing a milky fluid like cream. The whole tumor very much resembled the oak-apple. The liver was much enlarged, and of a nutmeg appearance. There was no disease in any part of the alimentary canal.

"The immense tumour found in the thorax of Imber does not consist in an alteration of any material structure, but is a new formation or adventitious growth.

The organ or tissue in which it commenced, may admit of various explanation. My impression is that it began in the lung, in the vicinity of the great vessels, and subsequently extended itself in other directions. In the firmest part, where the bloodvessels going into it are most numerous, the tumour adheres intimately to the lung. In this part, either in the substance of the lung or in the filamentous tissue connecting it with the adjoining parts, the tumour most probably originated, and the more soft and pulpy portions connected with the heart and great vessels may have been subsequently, and more rapidly formed." 295.

*Case* 3. Sarah Fyfe, aged 58, admitted June 25th, 1831, complaining of pain in the abdomen, which is hard and tumid in the hypogastric region —urine scanty and high-coloured—surface of the body pale and bloodless —several small, hard, and moveable tumors in various parts of the body. Six weeks previous to admission, she had a profuse sanguineous discharge from the vagina, since which her health has rapidly declined. 27th. Examined *per vaginam*, and discovered round, indurated masses, about the os uteri. She lingered till the 4th of July, when she died.

"*Dissection*. "*Head.*—A small quantity of fluid in the subarachnoid tissue and in the ventricles. Brain firm and remarkably pale: little or no blood appeared in the central or superficial vessels. A small indurated tumour in the falx of the dura mater. A tumour of a similar kind was situated in the right half of the pituitary gland, the size of a large pea. The carotid arteries in their canal were dilated and ossified. The posterior clynoid processes were thin and eroded, probably from the pressure of the arteries and the tumour of the pituitary gland.

*Thorax.*—Many tubercles were situated beneath the anterior part of the pleura costalis. Numerous similar tubercles were found on the pleura pulmonalis, throughout the substance of the lungs. The lungs were edematous and studded with small miliary tubercles, and in the upper part of the right lung there were several cavities. A considerable quantity of fluid was found in the cavities of the pleuræ.

*Heart.*—Slight hypertrophy: the left ventricle was dilated and softened.

*Right Auricle.*—In the appendix to the right auricle there was a mass of adventitious deposit, the size of a small walnut.

*Abdomen and Pelvis.*—The liver and pancreas contained many tubercles of the character before mentioned: these with the other viscera of the abdomen, were in other respects natural.

*Uterus.*—The cervix was enlarged and indurated, and there was a small tumor projecting from the fundus into the cavity.

The filamentous tissue between the bladder and uterus was a good deal thickened and indurated, and of a similar appearance to that of the neck of the uterus.

*Bladder.*—The mucous membrane was generally vascular: about the anterior part of the neck large portions of the mucous membrane were detached, leaving a rough and vascular surface." 298.

*Case* 4. Charles Jones, aged 64, has been hemiplegiac of the left side for 12 months past. Was admitted July 23d, 1833. He had been subject to cough and other pectoral complaints for several years; but, owing to the urgency of other symptoms (not mentioned) no particular attention was paid to them. He died on the 6th of August following.

*Dissection. Brain.*—An extraordinary morbid alteration was observed in the pons varolii; the particulars of the dissection of the brain, together with the symptoms referrible to it, I intend to relate on a future occasion.

*Thorax.*—In the upper portion of one of the lobes of the left lung was situated a tumour, the size of a small orange, it was imbedded in the centre of the lung, in the immediate vicinity of the bronchi and great vessel. Its surface was uneven with numerous rounded eminences. On making a section of the tumour, it proved to be of the fungoid or medullary character, and was composed of smaller lobules, in some parts presenting a high degree of vascularity. The lungs were edematous and loaded with blood. Traces of chronic pneumonia, in various stages, were observed, with copious infiltration of greenish fluid into the pulmonary tissue, in some places resembling gangrenous patches. There was extensive solid grey hepatization near the root of the left lung, where the tumour was situated.

Heart flabby, cavities and valves natural.

In the abdominal viscera no morbid change was noticed, except a large scrotal hernia, in which the intestine was confined by strong lengthened bands of membrane." 300.

We shall be anxious to learn the nature of the disease in the pons varolii, and the symptoms which attended it; but cannot expect to have our curiosity gratified till the appearance of the next volume of the Society's Transactions.

By the way, we have to congratulate the Society on two events—of unequal importance—first, the acquisition of a royal charter, by which they are enabled to make laws and regulations, the same as before, for their members. *Secondly*, the removal from Lincoln's-Inn Fields to the anomalous locality of Berners-street—a kind of "*no-man's-land*," equidistant from the bustle of the city and the ennui of the court end. We do not think the situation chosen is the best that could have been found; but still it is better—, that is, more convenient, than its former locale. We hope the new title and the new house will greatly augment the number of the Society's FELLOWS—for certain it is, that some of its *members* have *fallen off* within the last two or three years, without an adequate growth of new ones. The ***Royal*** Medico-Chirurgical Society is a very useful one for the reading and publishing of long papers, that could neither be read nor discussed in the *plebian* societies of the metropolis. The *latter*, however, will always have a decided advantage over the former in point of interest, and perhaps of utility. Cold water has generally been thrown on *discussion* in the aristocratic society, while it is the very life and soul of the popular associations. As all the good papers read at the Medico-Chirurgical Society are subsequently published, there is less anxiety to attend the rehearsal than otherwise would be manifested; while the fresh facts and collisions of opinion at the minor establishments keep up a constant curiosity, not to say excitement, in the minds of the listeners as well as of the debaters.

## SCIENTIAL MEDICINE—A NEW SYSTEM OF PHILOSOPHY, &C. By *Thomas Eden*, M.R.C.S.

SOME twenty-five years ago there was published, in eight or ten cantos, a poem called the "CRUISE," by a Lieutenant in the Royal Navy. So exquisitely ridiculous was this poem in its versification, nautical phrases, metaphors, and whole machinery, that it convulsed with laughter the crews (from the cabin to the cockpit) of every ship bearing the British flag! So universal was this effect, that many people began to doubt whether this said naval EPIC was not the production of some extremely clever fellow, who *purposely* rendered it a jest by an affectation of sincerity. It turned out, however, that the author *was in earnest*, and therefore he lost his immortality. Such, we suspect, will be the fate of the author of SCIENTIAL MEDICINE, excepting that part of it which relates to momentary *notoriety*. In this respect, Mr. Eden will be woefully disappointed. There can be little doubt that his expectations are of the most sanguine kind—that he supposed his new philosophy would astound the profession, and produce a kind of *emeute* in the medical world! No such thing will take place. His lucubrations are more insane than the ravings of Rabelais—untinctured with humour, wit, or kind-heartedness. From beginning to end, the book is full of self-conceit and professional malice. The author labours to ridicule and debase the practitioners of medicine, as if no one in that philanthropic department of human knowledge had ever possessed a gleam of light or reason, till Thomas Eden, Esq. Member of the Royal College of Surgeons, came into the world, in order to disseminate his precepts and propositions. And what is this "New System of Philosophy?" A tissue of absurdities—for the most part unintelligible—except where it is libellous of every thing respectable in medicine! A single quotation will justify this severity of censure—a severity in which we rarely indulge, but which will be *felt* when we exercise it.

"284. Honey is best tasted when concrete, folly best seen when concentrate, and individual inabilities are best estimated by observing that many of them amount to nothing. And it is by observing the proceedings of medical societies —it is by observing that the inabilities of professors, when accumulated, amount to impotency, that the *acephalous* nature of the science they study is best appreciated. When Bacon took away the folly of *reasoning without fact*, he left us under the equally great delusion of *fact without reasoning;* and the professors of *acephalous* medicine unable to reason, without the power of inferring, and not knowing that only that knowledge which applies to the future is useful, meet in medical societies, and in solemn conclave talk solely of things which are past, found drivelling questions on by-gone facts,—egotistically communicate their seemings,—all busily intent on mutually vomiting and swallowing one another's opinions. And so utterly impotent is the accumulated intellect of the educated in *acephalous* medicine, that professors of the science meet, and neither by premeditation nor by any accidental oozing does any useful knowledge, session after session, escape from any one of them. So *utterly impotent are their reasoning powers*, that even the verbal sign of mental inference—the word 'therefore'—never occurs in their proceedings; that or any other sign of inference is the 'so be it,' the 'amen,' which ever sticks ominously in the throat of medical professors, —they cannot utter it; or, in the proceedings of medical societies, there are about as many sessions as there are inferences, that is, counting both the right (?) and the wrong, there appears from their accumulated strength about one inference a year. Yet the members of such societies are well satisfied, because they are thoroughly well deluded; they busy themselves with *fact*, and then suppose they have obtained useful *knowledge;* they look into the past, and are confident they are at the truth; but, 'like monkeys at a looking-glass,' they never catch hold of it, and near as it seems, they never can.* And there are now in the metropolis of Britain medical societies who when you ask them their age point to their archives and *talk of centuries*, and yet from the hour of their institution to the present moment, all the useful knowledge they have obtained may find record ample enough on the *head of a shilling*, and permanent enough on the tail of a tadpole. Such is *acephalous medicine*, and such are its professors; things fitly made, and by many of the scientific fitly used for laughing-stocks; and persons who are becoming, and I will bear my testimony 'justly becoming," a proverb to the people—persons who liberally labour for the public good, and for their blindness amply reap derision." 259.

We shall not waste any more time or space on such an insane and ill-natured production. The man who calmly points out the errors of the profession to his professional brethren, is a benefactor to them and to the community; but he who launches his tomahawk against the *whole profession* is an assassin of character, who deserves no pity and can expect no countenance.

---

* "I advise the medical societies of the metropolis (the medico-chirurgical especially) to publish *all* their facts; and as no useful knowledge—no useful 'living' truths—ever came out of their past inert facts, as a suitable title to them, or motto, I recommend these two words—'*Addled Eggs*.'"

## PATHOLOGY OF THE UTERUS AND ITS APPENDAGES. By *Robert Lee*, M.D. F.R.S.

AMONG the clever articles in the Cyclopædia of Practical Medicine, Dr. Lee's paper, under the above title, holds a distinguished station. The pathological researches of this talented and indefatigable physician are beyond all praise, and must, ere long, place him high on the list of benefactors to the human race, and cultivators of the healing art. Of this article, which, of course, is elementary, we can only give a general outline—and that of only certain prominent portions.

Dr. Lee divides the diseases of the uterus into three kinds—1, those produced by inflammation—2, by the formation of tumors not malignant—and 3, by malignant action, disorganising its different textures.

Inflammation of the lining membrane of the uterus sometimes produces merely an increase of the natural secretion—sometimes a puriform discharge. In painful menstruation, there is occasionally thrown off, as is now well known, a kind of membrane, something like the decidua. Such females usually suffer uneasiness in the region of the uterus, even in the intervals of menstruation. "The false membrane is probably formed between the monthly periods, by a peculiar and specific inflammation of the mucous coat of the uterus. The symptoms would lead to the inference that the substance of the uterus is affected." Since the time of Morgagni, (who first described this disease,) most authors have acknowledged the obstinacy of the complaint. Denman recommended mercury to ptyalism, with ammoniated tincture of iron, various tonics, and Tunbridge waters, &c. with indifferent success. Burns said that time was more frequently efficacious than physic. Dewees exhibited camphor and gum arabic to relieve the pain; and the volatile tincture of guaiacum as a more permanent remedy. The pathology and treatment, however, of this affection are far from being settled. The occasional detraction of blood from the pelvic region during the intervals of menstruation, is useful; while the exhibition of calomel, Dover's powder, and camphor—tepid injections—and the horizontal position, will be necessary also. The complaint is nearly allied to what Dr. Gooch has denominated "irritable uterus." In this doctrine Dr. Dewees does not agree.

"Chronic congestion and inflammation of the uterus appear to arise most frequently from exposure to cold and fatigue during menstruation, and subsequent to abortion or parturition. It is an obstinate disease, and often resists the effects of all remedies for many months or even years. The patient should remain in the horizontal position if the pain is constant and severe. Blood must be drawn from the arm or from the uterine region by leeches, or by cupping-glasses. When the circulation is undisturbed, as is most frequently the case, local is to be preferred to general bloodletting. Some think that cupping affords decidedly more relief than leeches, and that the glasses should be applied over the sacrum, or to the part to which the pain is referred. Dr. Dewees applies them to the inside of the thighs. The bowels should be regulated by castor-oil, infusion and electuary of senna, super-tartrate of potash, and Epsom salts. To subdue the pain the tepid hip-bath, warm fomentations, and narcotics must be had recourse to, and camphor combined with extract of hyoscyamus, henbane, or poppy, should be administered twice or thrice a day. A belladonna plaster should be applied over the sacrum. Warm decoction of poppy, or lukewarm linseed tea, or eight or ten grains of opium dissolved in a pint of hot water or solution of starch, may be thrown up the vagina, and an ounce of warm milk with a drachm of laudanum may be injected into the rectum, after the bowels have been evacuated. An alterative course of mercury has afforded decided relief in some cases. Like all the other chronic phlegmasiæ, when the disease has lasted long, relief sometimes follows a different plan of treatment, viz. the employment of exercise, bitters, tonics, sulphurous and chalybeate waters. Where the stomach has suffered much, the phosphate of iron may be given with advantage.

Chronic inflammation of the uterus does not degenerate into cancer, as many suppose, and it rarely terminates in suppuration of the muscular tissue of the uterus. Cases of abscess of the walls of the unimpregnated uterus have been described by writers, but they are very seldom met with. Mr. Howship has a uterus in his possession, in the muscular coat of which, or in the cellular membrane between its layers, was an abscess which contained about an ounce of pus. The symptoms were not ascertained before death. This is the only example of abscess of the walls of the uterus from simple inflammation that we have seen; those abscesses in the uterus described by Dr. Hooper were connected with malignant disease of the organ. Where a collection of pus has taken place within the cavity of the uterus, there has also in most cases been present a malignant organic affection of the os and cervix uteri." 9.

Dr. Lee makes some observations on inflammation of the follicles of the os uteri—or, as Mad. Boivin calls it—granular inflammation of the os uteri—a disease little understood, and only to be detected by the speculum.

"The os uteri is swollen, red, ecchymosed, morbidly sensible when touched, and disposed to bleed. There is often present a leucorrhœal discharge from the vagina, and a state of excitement bordering upon nymphomania. In some cases the affection has been misunderstood, from the absence of local symptoms, or because it has been accompanied with more severe lesion. The granulations, when hard, are usually very small, like grains of sand or the seeds of the poppy; if they are larger, their softness prevents them from being discovered, except by a very experienced practitioner.

These granulations are found in a subacute or chronic state. In the former they are seen on the lips of the os uteri, sometimes in small numbers like peas, firm and white; more frequently in great numbers, like grains of millet-seed, also white and soft, and vesicular, without roots. It is from their interstices that the blood flows which escapes into the vagina when they are touched, or when the bowels are evacuated.

In the chronic state the enlarged follicles or granulations are hard, small, and white, and rest on soft, red, miliary elevations, in one case like varicose veins. The causes of this affection are not the same in all cases; they are often obscure, like the causes of all uterine diseases. In some cases the affection seems to have been produced by syphilis or some cutaneous disease, or by the presence of a fibrous tumour in the uterus. In the examination of dead bodies we have repeatedly seen the appearances described by Boivin, and we agree with her in thinking that they depend on an enlargement of the mucous follicles of the os uteri. We have seen numbers of these bodies much enlarged, both in the vagina and os uteri, when individuals had died from chronic disease unconnected with any morbid state of the uterus.

Emollients and local bloodletting are the remedies recommended by Boivin in the subacute stage of the disease. The treatment must be stimulating in the chronic stage, and afterwards, in the greater number of cases, derivatives must be had recourse to. The greatest advantages have resulted from their use in many cases. Where the disease is syphilitic, mercury must be employed." 10.

Tympanitis of the uterus is next treated of, but Dr. Lee acknowledges that no instance of this or of dropsy of the unimpregnated uterus has ever come under his observation. They are rare diseases.

Our author proceeds to the consideration of tumors and enlargements situated in the orifice of the uterus, not of a malignant character. These he divides into the fibrous, the follicular or granular, the cystic or vesicular, and the mucous tumors. He has published an important paper on this subject in the second part of the 18th volume of the Medico-Chirurgical Transactions; but as we devoted much space to this subject in our last number, we must be brief in the present instance.

"The fibrous tumour is usually of a globular form, and varies greatly in size. It has generally a cartilaginious and fibrous structure, and the fibres are often disposed in a concentric or converging manner. This tumour has sometimes a granular appearance, or seems to consist of a congeries of smaller tumours, of different densities, each having a thin capsule of cellular membrane. When large, the tumour is often unequal, lobulated, or divided by deep fissures, and arteries and veins of considerable magnitude can be traced into its substance. Cavities containing a bloody or dark-coloured gelatinous fluid are sometimes formed in the central parts of the tumour, by a process of softening which its substance undergoes. In other cases the tumour does not manifest a disposition to become softer as it enlarges, but its density gradually increases until the whole mass has become cartilaginious, without arteries or veins containing red blood; or calcareous depositions are gradually formed in the substance of the tumour, until it is partially or completely converted into a concretion of phosphate or carbonate of lime. This is generally of a light yellow colour or nearly white, soft and porous, like pumice-stone; but instances have occurred where it has become so hard as to admit of being polished like marble or ivory. These deposits usually first take place in the most dense points of the tumour. In a few rare cases, they have been formed on the surface of the tumour, and have inclosed it like the shell of an egg. Gardien states that the smallest tumours most frequently undergo this transformation. Andral, on the authority of Brugnatelli, states that carbonate and phosphate of lime, with an animal or gelatinous matter, enter into the composition of these bodies. Dr. Turner, professor of chemistry in the London University, had the kindness to analyse, at our request, two years ago, a small concretion, which was passed during life from the uterus of a female above sixty years of age. This was found to consist entirely of carbonate of lime and animal matter. Dr. Bostock has more recently analysed several specimens of uterine concretions, and he has found them principally to consist of phosphate and carbonate of lime with animal matter.*

In several cases of fibro-calcareous tumour of the uterus which have come under our observation, and of which we have related the histories in the paper referred to, little uneasiness was experienced during life; but in another case there was also malignant ulceration of the uterus, and portions of the calcareous tumour were discharged from the vagina long before the disease proved fatal. Many months previous to her death this patient had attacks of hæmorrhage and excrutiating pains in the uterus before the concretions were passed. There were also sallowness of the complexion, and great irritability of stomach, as in cases of malignant disease." 13.

---

* Med. Chirurg. Transact. vol. xviii. part ii, p. 313.

Where these tumors are detected by examination, and where they hang loose, they may be removed by a pair of forceps. When inflammation of the uterus results from the presence of these bodies, leeches and other appropriate means should be employed.

"The history of fibrous tumors and polypi of the uterus" occupies several columns of the Cyclopædia, and is very ably drawn up by Dr. Lee. It is incapable of abridgement; but it will be read with interest and profit by the numerous subscribers to that meritorious work.

### TREATMENT.

"When formed under the peritoneum and between the muscular fibres of the uterus, fibrous tumours are but little under the influence either of external or internal remedies. Iodine and mercury have little effect either in arresting their growth or promoting their absorption. The increased determination of blood which often takes place to the uterus when these bodies are formed in its walls, should be relieved by local bloodletting, anodynes, and rest in the recumbent position; and when profuse hæmorrhage occurs, it should be controlled by rest in the recumbent position, cold applications to the hypogastrium, the tampon, and the superacetate of lead. The uneasy sensations from pressure on the bloodvessels and nerves of the lower extremities may sometimes be slightly relieved by certain changes of posture; and if the tumour be moveable and occcupies the hollow of the sacrum, and compresses the bladder and rectum, it may be removed from this situation by pressing it above the brim of the pelvis. In most cases fibrous tumours cannot be removed by art while they remain within the cavity of the uterus. When the hæmorrhage endangers life, some authors recommend us to dilate the os uteri artificially, and to remove the tumour. Lisfranc has recorded a case in which incisions were made through the os uteri and the tumour removed.

When fibrous tumours are formed under the lining membrane of the uterus, and have passed through its orifice into the vagina, constituting polypi, they may be removed by a ligature, or their root may be divided with a knife, or they may be twisted off. Since the invention of the double canula by Levret, various instruments have been employed for passing ligatures around the stems of uterine polypi. For polypi of ordinary dimensions the instrument of Gœrz, improved by Niessen and Dr. Gooch, is the best that can be employed. When the tumour is of large dimensions, a curved rod or tube is preferable. When the two silver canulæ are made use of, a strong ligature must be introduced through both tubes, so that its two ends may hang out of their lower apertures, while the middle portion forms a noose between the two upper apertures. Thus armed, the canula must be passed over the globular part of the tumour, the fore-finger of the left hand having previously been introduced as a guide to the instrument. One of the tubes is then to be kept fixed, while the other tube is to be carried slowly round the circumference of the root of the tumour until it reaches the opposite side of the tube, which has been kept in the same place. The ligature must be tightened until the neck of the tumour is completely cut across. When the tumour becomes putrid, and many days elapse before its root is divided by the ligature, the tumour should be drawn down, and the peduncle should be divided with the knife or scissors The greatest attention should be paid to cleanliness, and the offensive discharge should be washed away by injection of tepid water and solutions of the chlorurets. This operation is not without danger. In a case which occurred in St. George's Hospital, under the care of Mr. Babington, the patient died of uterine phlebitis. M. Blandin saw a case terminate fatally from the same disease. Cases have repeatedly terminated unfavourably from ulceration being excited in that part of the uterus to which the tumour had adhered. Dupuytren states that he has met with eight or ten cases where patients were destroyed after the application of a ligature around the root of a polypus of the uterus, and where the symptoms were those produced by the absorption of pus into the system. M. Dupuytren has removed two hundred uterine polypi by excision in the course of the last twenty years. In this large number hemorrhage has only taken place twice, and in both these instances it was permanently arrested by plugging. In eight cases M. Velpeau has never met with hemorrhage. Many other distinguished continental surgeons prefer the excision of uterine polypi to their removal by the ligature, and our experience inclines us to prefer the former method. Where the root of the tumour is largely supplied with bloodvessels, as in a recent case which came under our observation, to obviate the danger of hemorrhage after its division, a ligature should previously be firmly applied around it, at a short distance from the uterus. Dubois affirms that even this does not secure the patient from hemorrhage. Dupuytren seizes the tumour with the forceps of Museux, and draws it down till the os uteri can be seen at the entrance of the vagina; a pair of curved scissors is then conducted along the finger to the root of the tumour and it is divided. It is only in cases where the neck of the polypus is slender and of soft consistence that it can be safely twisted off." 21.

We pass over the malignant or cancerous diseases of the uterus—for, unfortunately, "there are no means by which we can prevent or remove them." They do not depend on a common inflammation, but a specific action of the parts, which proceeds invariably, sooner or later, to destruction of the patient. Still the sufferings of the individual may often be mitigated by guarding against those attacks of plethora and inflammation which frequently occur in the course of the malady, and aggravate the symptoms. Leeches to the labia pudendi are the best means on such occasions. Battley's liq. opii sed. introduced into the rectum, with a small quantity of thin starch, will often relieve pain when opium given by the mouth fails.

An instructive chapter is occupied with diseases of the vagina and vulva, followed by a section on those of the urethra, forming a good epitome of our knowledge on these topics. It is incapable of analysis. We return Dr. Lee our best thanks for the information contained in this part of the Cyclopædia.

## AN INQUIRY INTO THE NATURE AND PROPERTIES OF THE BLOOD, IN HEALTH AND DISEASE. By the late *Charles Turner Thackrah.* A new and enlarged Edition, arranged and revised by *Thomas G. Wright*, M.D., to which is prefixed a Biographical Memoir of Mr. Thackrah. London, 1834.

THE industrious author of this work, already rather favourably known to the medical public by the first edition of it, published in 1819, as well as by some other medical essays, did not, unfortunately, live long enough to complete and superintend the present posthumous edition. The author's papers, from which the work as we now have it has been compiled, were committed by his widow to the care, revision, and arrangement of Dr. Wright, and certainly, if we may judge from a mere inspection of the matter, the task was not one of the most agreeable. The volume is dedicated to Sir A. P. Cooper, under whose auspices the first edition was published, and commences with a biographical memoir of the author, from which we learn that he had been a long time labouring under very delicate health, whilst preparing this second edition, which death prevented him from completely finishing. This of course accounts satisfactorily for the unconnected and detached form in which many of the observations in the book present themselves. The day is now gone by, when the importance of such a subject as "an Inquiry into the Nature and Properties of the Blood, in Health and Disease," could be for a moment called in question. To detail the general properties of the circulating mass, its several physical and chemical habitudes, its peculiarities, as depending on the different parts of the system in which it is found, as well as in the different classes of animals—to point out the various modifications and changes produced in it by disease, as also the therapeutical indications thence afforded to the physician, must undoubtedly strike the most cursory observer as matters of no ordinary moment. When we consider what were the medical doctrines which prevailed for so long a time in the schools, whereby all morbid phenomena were referred either to the influence of the nervous system, or to the agency of the solids, we cannot feel much surprize that the constitution of the blood, and of the other fluids of the body, and the changes produced in them by disease, were almost entirely disregarded. That the humoral pathology led to very many erroneous ideas regarding the nature and treatment of disease, no one will attempt to deny. There was we know, a time when every disease was referred to acidity, or alkalescence of the blood, or of some of the other fluids of the body. We are also well aware that, when such theories were taken up, the only legitimate mode of investigating the nature and seat of disease was altogether abandoned, and gratuitous hypothesis usurped the place of attentive observation of facts, and rigorous induction from them. This error being in time detected, the entire humoral pathology fell into almost universal neglect, and medical men, running from one extreme into another, embraced the diametrically opposite doctrine of exclusive solidism. But now that the Baconian method of philosophizing has been applied to medicine, as well as to the other branches of physical science, when not only every organ and tissue, but every fluid of the body, is subjected to experiment, it was not difficult to foresee that the theory of exclusive solidism could not hold its ground much longer, numerous cases of diseases continually presenting themselves, of which it was found totally incapable of affording any satisfactory explanation. When we consider the similarity subsisting between the proximate principles of the blood and the solids of the body, and the close physiological connexion which also subsists between them, it will be no easy matter to conceive how disease could exist to any amount in the solids, without the blood being also affected more or less, nor how the nature and constitution of the blood could be materially altered, without such alteration producing a reflected alteration in the state of the solids. And certainly, if complexity of formation be a sufficient ground whence to infer liability to morbid change, such liability will be readily admitted to exist in the blood; and hence the necessity and importance of a work purporting, as the present does, to detail those various changes and modifications, must be manifest. How far our author has succeeded in helping to supply such a desideratum in medical literature, we shall now proceed to consider.

After enumerating in the preface the various difficulties and obstacles which stand in the way of this inquiry, and their causes, we meet the following modest and unpretending observations.

"To clear away these obstacles has been one object of my attention, and if in this only I have been successful, science will be benefited. The labourer who removes the rubbish on the side of a projected building, raises not indeed the structure, but in preparing the way for the more able workman, he takes an office, though less respectable, yet not, perhaps, less useful." 22.

Again, to the same effect, we read as follows:

"Whatever opinion may be entertained of the success of my researches, of the mode in which they have been conducted, or of the conclusions to which they have led, I lay claim to fairness of intention and honesty of detail. Unbiassed by prejudice, unshackled by preconceived notions, I have impartially stated the individual results of my experiments, and noticed every regular or casual discordancy. It has been my aim rather to ascertain facts than to support opinions —to study the œconomy of nature, rather than to fetter her with conjectural or inconsistent theories." 23.

Having briefly described the course of the circulation, and the changes which the blood undergoes therein, the several secretions, &c. derived from it, he says—

"The formation of the blood is a process imperfectly understood. We know that food is digested and chyle formed; that this milky fluid is carried into the blood; that other liquids, thinner and in larger quantities, are also absorbed, and rapidly transmitted to the circulatory system; and we believe that these are the two principal sources of supply. Whenever sanguification be completed, the materials seem long in the course of preparation. Chyle taken from the lacteals coagulates, and the fluid in the absorbents approaches in character to the serum of the blood." 29.

After giving the several and widely-differing estimates of the quantity of blood in the body, as furnished by different physiologists, some of whom (Keill) stating it to be 100 lbs.—others estimating it at not more than 8 lbs.; Haller at from 28 to 30, and Young at 40, he says—

"The wide difference in these estimates seems to depend on the want of such data as are requisite for accurate research. It is true, indeed, that the contents of the several arteries and veins may be subjected to calculation, but of the blood circulating in the capillaries, no accurate estimate can be formed. When we reflect on the minuteness of these capillaries on the universality of their distribution, and on the large proportion which they constitute of muscle and other solids—when we remark, also, the red colour which the flesh of a slaughtered animal retains, we must refuse to admit any estimate formed from the quantity of blood drawn off in fatal hemorrhage. The blood, moreover, cannot be obtained in toto without the admixture of its secretions. If we collect the blood of a slaughtered animal, our estimate is invalidated by the changes which take place during the period, and especially by the water, or a serous fluid, which is largely absorbed into the circulation during hemorrhage." 30.

We must object, in toto, to an opinion contained in the above extract, viz. that the red colour of muscle depends on blood, either contained in its vessels or extravasated through them. The illustrious Bichat set that question at rest long since.

The various estimates regarding the *size* of the globules of the blood are next presented to us. Some physiologists stated them to be the $\frac{7}{1500}$ of an inch in diameter, others $\frac{1}{4000}$ths; Wollaston computed them at $\frac{1}{4900}$ths; Young $\frac{1}{6060}$ths; whilst Sir E. Home and M. Bauer estimated the diameter of a globule, devoid of its colouring matter, at $\frac{1}{2000}$ths. Next the *form* of these particles has been the subject of dispute. Leuwenhock represents the globules as circular when at rest, and elliptical when in motion; and states that each principal globule consists of six minor and separable globules, each of which again consists of six other smaller globules. Hunter considered these particles to be globular and equal in size in the same animal. Blumenbach states them to be globular when at rest, and oval when in motion. Raspail represents them as varying in size in different vessels of the same individual. After describing the separation of the blood when taken from the body into the *serum* and *crassamentum*, he takes up the remainder of the first chapter in combating Mr. Hunter's theory of the vitality of the blood. From the manner in which our author argues the matter in this and in a subsequent chapter, we must say that he was entirely out of his element, when he attempted to venture on metaphysical disquisitions.

With respect to the *specific gravity* of healthy blood, our author averages it at 1041;—he estimates the *solid contents* at nearly one-fifth of the entire mass. M. LE CANN, who has given an analysis of the blood, in the Journal de Pharmacie for Sept. 1831, gives the proportion of water as 780·145 in 1000. The average specific gravity of healthy *serum* our author states to be from 1020 to 1030.

> "*Serum* is principally composed of albumen and water; but it contains also carbonate, sulphate, and muriate of soda; muriate and sulphate of potass; phosphates of soda and of lime, and a little impure acetate of soda. Serum largely absorbs carbonic acid. On agitating a small quantity in three inches of carbonic acid gas, one inch quickly disappeared. The proportion of albumen in serum is, on the average of our experiments, 42 in 1000: that of saline matters less than 1 in 1000. Serum is said to contain a free alkali, which, according to Berzelius, Marcet, and Bostock, is soda." 40.
>
> "The solid contents left by evaporating serum are stated by Dr. Bostock to be 12 per cent. My examination presents a different result: 4·4 per cent. is the average of our experiments on the serum of healthy blood. My observations, moreover, shew that the last effusion of serum from the crassamentum contains a much greater proportion of albumen than the first.
>
> A temperature of 150°—160° quickly reduces serum to a coagulum, which is principally albumen. From coagulated serum a small quantity of fluid may be pressed, which has unfortunately obtained the name of *serosity*. It is water holding in solution about one-fiftieth part of albuminous matter, with a considerable proportion of alkaline salts." 41.

After stating the *crassamentum* or clot to consist of red particles, fibrine, and a very important ingredient which has been overlooked or but slightly noticed, but which constitutes the largest proportion, namely, albumen, he next comes to consider the colouring matter of the blood. Various artificial means have been proposed by different chemists for the separation of this from the other ingredients. To this constituent of the blood continental writers have given the name *hæmatosine*. Berzelius and Engelhart have demonstrated iron to form the basis of this substance. The state in which iron exists in the blood, whether as a mere oxide, or in combination with an acid, is a matter as yet not satisfactorily ascertained. Hæmatosine is the only constituent of the blood not found in any of the solids or secretions of the body.

We next come to the consideration of another constituent of crassamentum, namely, the *fibrine*. This may, in general, be obtained by enclosing crassamentum in a linen bag, and by pressing and washing the mass, till a stringy substance alone appears. This is fibrine, combined with a small proportion of oil, albumen, and saline matter. The elements of fibrine are azote, carbon, and oxygen;—azote is contained in fibrine in a larger proportion than in any other animal substance.

> "The proportion of fibrine in blood is stated by *Berzelius* at ·75 to 1000, but *Whiting*, from his experiments, concludes it to be from 1 to 2 in 1000. Our experiments give an average of 2·8 in 1000. The sp. gravity of fibrine, according to Davy, varies from 1046 to 1060. Prout and others have considered it to be less than that of serum, 'since fibrine usually swims in the serum.' The simple experiment, however, of dropping some *pressed* fibrine into serum, shews at once the sinking of the solid, and the consequent error of this opinion."—"In the circulatory blood fibrine is either held in solution, or exists, according to the observation of *Bauer*, in the state of very minute white globules. It is well known to form the basis of muscle; and so nearly does it approach to organized matter, that the galvanic aura increases its contraction. It affords the framework of the body, and that also of the preternatural structures resulting from disease. Coagulable or plastic lymph is a combination of fibrine and albumen." 47.

The upper surface of the crassamentum is generally observed to be of a much more florid colour than the lower: this has been said to be caused by the atmosphere, which removes the carbon from all that part of the clot under its influence. Dr. J. Davy rejects this opinion, and will have it that the air produces this effect by altering the specific gravity of the hæmatosine, which then subsides in the clot. In Appendix II. of the work, an experiment (12) is adduced intended to refute Dr. Davy's opinion, but which we are disposed to consider as corroborative of it; certainly it cannot be looked on as at all tending to weaken it. According to Dr. Stephens the florid colour of the clot is to be referred to saline ingredients contained in the serum.

The remaining constituents of the blood are "an oily substance named by M. Denis GRAISSE PHOSPHUREE ROUGE," and "GRAISSE PHOSPHUREE BLANCHE," noticed by *Berzelius* and other chemists.

> "It appears to be identical with the Matière cerebrale rouge, and the Matière cerebrale blanche, which Vauquelin discovered in the brain. In addition to the ordinary elements of animal matter, the oil is found to contain phosphorus and sulphur. It is obtained by exposing the dry contents of blood to the action of æther at a moderately high temperature, and under strong pressure; or by boiling them in alcohol. On gradually cooling the solution the *graisse* subsides." 49.

Another of the ingredients of blood is the MUCO-EXTRACTIVE MATTER of *Marcet;* the IMPURE LACTATE OF SODA of *Berzelius;* the OZMAZOME of *Denis.* This may be procured from the blood by digestion in cold alcohol. It possesses the properties of the substance, which Thenard extracted from muscular fibre, and to which he gave the name of Ozmazome.

Another ingredient discovered in the blood by ***M. Denis*** is CRUORINE, which is solid, colourless, and transparent. This is soluble in water, particularly cold water, and insoluble in alcohol and æther. It is most readily procured from fibrine, "by boiling this substance dried and pulverized for five to ten minutes, in forty or fifty times its weight of water. The mixture is then to be filtered and slowly evaporated; and when the residue has been washed with hot alcohol, to remove the oil, pure cruorine will remain at the bottom of the vessel." ***Ibid.***

The editor gives from himself an analysis of the *halitus* of the blood, which, according to Fourcroy, consists almost entirely of aqueous vapour, holding in solution a minute portion of animal matter; which ***Bondet*** supposes to be a volatile acid substance, analogous to the "graisse phosphuree" of Chevreuil and Denis. Haller considered this identical with the matter of perspiration. It is found to be of a more pungent, and of a ranker odour in males than in females, and is said to be wanting in eunuchs and old people, and for this reason is supposed to be connected with virility.

The results of the author's experiments on healthy blood, with respect to its three chief constituents, are as follows:—in 1000 parts—

| | |
|---|---|
| Water - - - - - - | 796·55 |
| Hæmatosine and albumen - - | 200·1 |
| Fibrine - - - - - - | 2·8 |
| Dry contents of serum (saline) - - | ·55 |
| | 1000·000 |

After offering some conjectures with respect to the uses of the several constituents of the blood in the animal œconomy, and stating some of the changes in colour which various chemical agents produce in it, we are next introduced to the subject of the *coagulation of the blood.*

> "The separation of crassamentum from serum is ascribed to the contraction of the fibrine; for if this constituent be removed immediately on the effusion of the blood, no coagulation takes place. When we consider the small proportion of fibrine in blood, viz. 2·4 parts in 1000, we are surprised at the phenomenon. Is not coagulation rather an effect of the attraction of hæmatosine and albumen? In the living circulation, the action of an affinity may be prevented: deprived of vital influence, the blood, like every other fluid of the animal system, becomes subject to chemical laws." 53.

The above is not the only instance in the book wherein the author makes sad work, when he attempts to philosophize. For further information on this subject, see the April number of this Journal of the present year, p. 501. From a number of experiments undertaken with a view to determine the arrangement of the fibrine, and the proportion which exists in different parts of the crassamentum, Mr. Thackrah concludes that there is *most fibrine in the lowest part of the crassamentum, and least in the middle.* These experiments also would make it appear that the hæmatosine and albumen arrange themselves as variously as the fibrine.

That heat is evolved during coagulation has been affirmed and denied. Hunter and Dr. John Davy have decided in the negative, whilst Fourcroy, Dr. Gordon, and others have maintained the affirmative. Several experiments were instituted on the subject by the author, in which no rise of the thermometer was observed at the moment of coagulation.

Some observations made by Sir E. Home and Mr. Brande favour the opinion that carbonic acid gas is evolved during the coagulation of the blood. Dr. Davy denies it. Sir C. Scuddamore contends that experiments instituted by him establish the fact. "If we acknowledge the existence of a free alkali in the blood," says our author, "we cannot conceive the co-existence of an acid gas." One of the reasons given by Dr. Davy in support of his opinion is, that he has added one-fourth of a cubic inch of carbonic acid gas to an ounce of blood, and to a similar quantity of serum, "the whole of which has been absorbed, and yet the blood and serum still exhibited free alkali." The editor, Dr. Wright, very pertinently asks, "Do not these experiments prove that the free alkali exists in some state in which it is not acted on by the presence of carbonic acid? If so, they invalidate the objection urged by Mr. Thackrah in the next sentence." Dr. Stephens maintains the existence of carbonic acid in the blood;—he says that this acid is attracted and carried off by the oxygen of the atmosphere before the blood can be subjected to such experiments as those stated by our author. An experiment performed by Dr. A. T. Thomson, and detailed in the work by the editor, is to the same purport: as are also some experiments by Dr. Clanny, given in the Edinb. Journ. XXXII. 40. See also Brande, in Phil. Trans. 1818, 181, and Vogel, in *Annals of Philosophy*, VII. 57. Dr. Prout believes that one copious source of this acid in the blood is the conversion of its albumen into the gelatinous secretions of skin, &c.; gelatin containing three or four per cent. less carbon than albumen.*

Coagulation is influenced also by the quantity of blood in relation to the surface over which it is spread. The rapidity of coagulation being inversely as the quantity of blood, and disectly as the extent of surface. The material and shape of the vessel also seem to influence the quickness of coagulation. Dr. Babington found the proportions of serum and crassamentum to vary materially in the same blood drawn into differently-shaped vessels.† The author instituted some experiments in reference to the shape and material of the vessel, and suspects that the curious diversities with respect to the time of concretion, and the resulting proportions of serum and crassamentum to depend on the electric conditions of the respective metals in which the blood was contained. It is to be regretted that he did not make himself more intelligible with respect to the nature and grounds of this his suspicion.

Coagulation appears to be influenced by temperature also. According to Hewson and Hey,‡ the temperature of 98° is most favourable to coagulation.

According to our author, a temperature of 120°—130°, accelerates very considerably the concretion of the blood, and one of 100°—110° generally does so, but not in so marked a manner.

"When blood, on the point of concretion, is placed in a freezing mixture, the natural action is suspended, and a few drops only of serum exude.

---

* Bridgewater Treatise, No. VIII. 524.

† See Medico-Chirurg. Trans. xvi. pt. 2, 296–7.

‡ Exp. Inquiry, p. 6. Obs. on the Blood, p. 38.

How shall we account for the prevention of coagulation by cold? does cold prevent the play of chemical affinities?" (68.) Before the author proposed this question, he should have shewn, or endeavoured to shew that coagulation arises from the play of chemical affinities. The author next introduces experiments to shew that moderate agitation seems to promote concretion.

In the next chapter we are introduced to a very interesting subject, namely, the *cause of the blood's coagulation.* Various hypotheses have been employed to account for this result. Some have thought that the fluidity of the blood depended on the heat of the body, and that its coagulation is produced by its removal into a colder temperature. Experiments have proved the weakness of this hypothesis. From cases related by Morgagni, the observations of Fontana, and numerous experiments instituted by the author himself, he shews satisfactorily, that "the vital or nervous influence is the source of the blood's fluidity, and its loss the cause of coagulation." (91.) Whether this vitality resides in the blood itself, he leaves for others to consider. It would appear to us, that he is rather disposed to place this vitality in the vessels.

In the next chapter, the author states the results of his experiments on blood from different vessels of the same order. And, first, with respect to jugular and caval blood, taken from dogs, as nearly as possible, at the same time and under similar circumstances; the conclusion he arrived at, with respect to their coagulation, was, that "CONCRETION almost always takes place sooner in blood from the vena cava than in that from the jugular." 95. With respect to the SOLID CONTENTS, he always found them in larger proportion in jugular than in caval blood. From this difference in the contents of the jugular and caval veins, he was led to extend his enquiries to other vessels, and particularly with respect to the *vena portæ.* The contents of this vessel were found to be darker in *colour* than blood from other veins. Portal blood, also, was observed not to have the homogeneous character of other blood, its appearance giving the idea of imperfect elaboration. With respect to *specific gravity*, there was not found to be any marked difference in portal blood. With respect to the *comparative periods of concretion*, portal blood was observed to concrete much sooner than blood from other veins.

With respect to *the ultimate proportions of serum to crassamentum* in portal, as contrasted with jugular blood, experiments led him to the inference, that portal blood contains from about $\frac{1}{10}$ to $\frac{13}{10}$ more serum than blood from other veins; and, also, that the "separative change is much slower and less perfect in portal than in jugular blood."

The *character of the serum* of portal blood differs from that of jugular, the former being always observed to be red, and the latter straw-coloured. In order to account for this an experiment was instituted, the inference from which was, that the colour of portal serum depends rather on the state of the crassamentum in portal blood, than on any power possessed by portal serum of holding the red particles in solution. With respect to *the coagulation of portal serum* by heat, it was found to be less perfect than that of jugular serum, which our author supposes to depend on a difference in the state of the albumen, and not on the detention of the red particles, as may appear at first view.

The *disposition to putridity, in portal serum*, he found to be less than in jugular serum.

To ascertain *the proportion of solid matter in the serum* of portal, as contrasted with that in the serum of jugular blood, on experiment, the average was found to be in favour of portal serum containing more solid matter than jugular. This, however, subsequent experience inclined him to think attributable rather to the detention of the red particles, than to a larger proportion of albumen. With respect to the *crassamentum* in portal, contrasted with jugular blood, it was looser in texture than jugular, and contained serum up to the period of putrefaction. Our author's experiments on portal and jugular blood led him to the following inferences.

1. "That the blood from the vena portæ has the appearance of defective elaboration, and that its colour is darker, and more inclined to brown than to the modena."

2. "That portal blood concretes more quickly than blood from other veins."

3. "That it contains much more serum; and, 4, that the serum of portal blood, from the detention of colouring matter, is redder than serum carefully separated from the blood of other vessels. 5. That portal serum, by heat, concretes more quickly, but less completely, than jugular. 6. That the crassamentum of portal blood does not expel its serum as fully as blood from other vessels. 7. That portal crassamentum contains a smaller quantity of fibrine; and, 8, that portal blood in general contains much less albumen and hæmatosine than jugular." 111.

## CHAP. VI.

In this chapter, which has been added to the present edition by the editor, are noticed *the differences in the physical and chemical constitution of arterial and venous blood.*

In the physical characters of arterial and venous blood, the following distinctions have been observed.

"1. IN COLOUR. It is well known that arterial blood is generally of a florid scarlet hue, and venous of a Modena purple. This difference is most striking in the vessels near the heart; but it is also observable in the minutest capillaries. It does not, however, uniformly exist. In the *puer ceruleus*, for instance, a portion of venous blood passes to the left side of the heart, without having been transmitted to the lungs, and the blood in the arteries has a tinge of purple; and in those diseases in which respiration is imperfect, there is a similar result. Mr. Vines has observed, that if the spinal marrow of a horse or ass be divided as close to the brain as possible, the moment respiration ceases, the arterial blood becomes as dark-coloured as venous, and of the same temperature. Again, venous blood often approaches in colour to arterial, especially under great excitement." "The cause of this difference in colour is a question which has not yet been satisfactorily solved. The old opinion, that it arises from oxygenation of the ferruginous envelopes of the globules, has given way before the test of chemical analysis; and various other ingenious hypotheses have shared the same fate. Of those which are now advocated, the most generally received is that which ascribes the alteration to a decarbonization of the venous blood, and to a slight increase in the temperature of the arterial. Dr. Stephens has endeavoured to prove, that the arterial colour is produced by a change in the saline ingredients of the blood, and has quoted experiments, in which a florid scarlet hue was given to crassamentum by dipping it in an artificial saline serum, and not by oxygen gas." 116.

Dr. Turner was induced, by experiment, to adopt Dr. Stephens' opinion,

M. Barrueil, in the Annales d'Hygiène, April, 1829, p. 269, states, that blood kept for several weeks still preserves the property of being changed to a vermillion colour by oxygen gas, even when some of its elements, and particularly the fibrine and albumen, have undergone decomposition. It appears to him, that the colouring matter of the blood, on which the oxygen acts in preference, is endowed with great vital force, which is not extinguished till a considerable time after the complete death of all the other immediate principles of the same liquid. In support of this latter view, Berzelius, in his "View of Animal Chemistry," states that blood which still contains the colouring matter absorbs oxygen gas very quickly, when out of the body, and shaken in atmospheric air; on the other hand, serum, when destitute of colouring matter, does not change the atmospheric air before it begins to putrify.

"The *quantity* of blood is much greater in the veins than in the arieries. In addition to their functions as circulatory vessels, they perform the office of reservoirs, through which the current passes more or less languidly, according to the demands made on them by the heart and arterial system. Red blood is more abundant during youth than in manhood or old age, and is supplied most abundantly to those organs which are in progress of growth; in all cases, however, the dark blood preponderates." 116.

With respect to *temperature*, there is considerable discrepancy in the statements of authors on this point; in consequence of its close connexion with the subject of animal heat, great attention has been directed to it.

Crawford asserts that, in the pulmonary vessels, arterial blood possesses a larger amount of absolute heat than venous. The average deduced from his experiments is, that the capacity for caloric of the fluid (arterial), in the pulmonary veins, is to that (venous) of the pulmonary arteries, as 97·08 : 112, or nearly as 10 : 11½. Majendie computes it at 852:839." "Majendie states 101·75° to be the mean grade of venous blood, and 104° that of arterial." 117.

With respect to the *specific gravity*, there is no uniformly marked difference to be observed; *coagulation* is said by some to take place more rapidly in arterial than in venous blood, and that the former has a smaller proportion of serum.

## CHAP. VII.

In this chapter are noticed the *Effects of States of the Animal System on the Blood*. And with respect to *temperature* of body; this, being subject to such slight variation, can produce very little change in the character of the blood. The blood, is said, however, to be darker in cold regions than in temperate ones. *Age* has considerable effect on the blood, its quantity being greater in youth than in advanced life; at an early period, also, it is observed to be bright in colour, coagulates quickly, throws off little serum, and leaves the crassamentum soft and watery. With respect *to sex*, our author observes that there is generally found more water and less fibrine in the blood of females than in that of males; he conceives this to arise from their different habits of living. *Muscular exercise*, he observes, has a marked influence on the character of the blood—it appears to heighten its scarlet hue.

DIGESTION and DIET have great effect on the blood. It is evident, if the process of digestion be incomplete, the quantity and quality of the chyle, and consequently that of the blood, must be materially affected. From some experiments made by the author on dogs which had fasted, and on others which had been fed recently, it appears "that blood from the fasted animal does not so quickly concrete; that its serum contains a proportion of albumen about equal to that from one recently fed; that its crassamentum yields rather more hæmatosine, albumen, and fibrine; and, as a consequence of all these, rather less water." (128.) The principal difference he observed to consist in the period of concretion, to which there is a greater disposition in blood from a recently fed animal.

He next considers, *whether the milky or cream-like appearance, which serum sometimes assumes, depends on digestion.*

This phenomenon has given rise to much conjecture. Hewson conceived this substance to be produced by the absorption of fat. Dr. Marcet seems to think the substance to be derived from the chyle of animal food, and that it is closely allied to cream; and Berzelius states that a portion he examined consisted of this fluid and albumen; whilst Raspail, in his Organic Chemistry, considers the phenomenon to be produced by the presence of an acid in the blood, which saturates the alkaline menstruum of the albumen, and hence it is precipitated from the serum. He remarks, this effect may be produced by excess in the use of spirituous liquors, or by inflammatory action.

The *quality* of the food influences the blood, vegetable diet diluting, and animal thickening it. This observation, however, as our author remarks, applies only to the hæmatosine and water, but not, as far as he thinks, to the proportion of albumen. He states, also, that cellular dropsy, without diseased liver or ascites, has been frequently observed to arise from the continued use of poor, low, and vegetable diet, whilst, on the other hand, excess of animal food, without proportionate exercise, seems to reduce too much the aqueous part of the blood, thereby giving rise to an inordinate secretion of uric acid from the kidneys, and gravel; frequently, also, to concretions on the joints. *Fatness* or *leanness* also seem to affect the quantity and quality of the blood, fat animals having in general less of it, in proportion to their weight, than lean ones.

*Impressions on the nervous system* have a remarkable effect on the blood.

"Syncope immediately disposes the blood to concrete. In venesection, when this process has commenced in five minutes, faintness has reduced the period to two; and when ninety seconds were before required, deliquium has instantly caused the blood to cake in forty." 132.

With respect to the effects produced on the blood by the state of the system, in reference to *strength* or *debility*, various and opposite opinions have been entertained with respect to the period of its concretion. From numerous and careful experiments instituted by our author on this point, he infers that, "in the dog, sheep, horse, and hog, the blood concretes slowly, in regular proportion to the tonic state, or that condition of the system in which the vital powers are strongest." With respect to the exudation of serum, as influenced by debility, he uniformly found that "blood, taken from an animal in articulo mortis, never fully separates its serum, and rarely throws off even a small quantity."

After stating that *hæmorrhage increases the tensity of the blood*, an opinion, by the way, held universally by the profession, our author asks, "how shall we explain this fact? Shall we consider that a sensation of inanition is produced by copious bleeding in the blood-vessels, and the whole corporeal system, and that, in consequence, the provident principle of nature excites the absorbents to increased action?" The author might have recollected that it is an opinion universally entertained by medical men, that loss of blood excites the action of the absorbents, and in fact that when the physician wishes for example to ensure and expedite the action of mercury on the system, he possesses an infallible means of doing so by having recourse to venesection. It is an admitted principle, that lowering the action of the heart and arteries in any way excites the action of the absorbents, and it is with this view that digitalis is given in dropsy.

From some experiments instituted by the author, he concludes that "utero-gestation increases the proportion of albumen and hæmatosine." 148.

We shall now pass on to Chap. IX. which treats of the BLOOD IN DISEASE.

### SECT. 1. *Observations on the Blood in its Vessels.*

"Blood is sometimes found strongly coagulated in its vessels. Haller remarked a concreted tremulous jelly in the veins, even of a living person. Limited coagulation is often seen in mortification. It is also found, though to a minor extent, above the ligature or division of an artery. But the part in which the appearance is most remarkable is the heart. In this organ considerable masses of white or rose-coloured coagula (false polypi) are not unfrequently found after death, attached near the large valves." "The opinion common in the profession that false polypi are formed after life is extinct, and have consequently no etiological importance, is opposed by examination of their structure." "Death, therefore, I conceive, in a great number, perhaps in a majority of cases, has polypi for its *immediate* cause." 165.

Our author next discusses the fluidity of the blood in its vessels, and on this subject he gives a large quotation from an essay on cholera. He here combats the opinion of the non-coagulation of the blood in this disease, and states his suspicion that most of the cases recorded as such were founded only on retardation of the process, inasmuch as when this fluid is removed out of its natural vessels, signs of concretion become soon apparent. He offers an ingenious conjecture by way of accounting for this fluidity after death in such cases. In all cases of death, where the nervous system has been the part primarily attacked, as in fatal impression from lightning, certain poisons and accidents, and in fatal cholera, he supposes that life remains for a considerable time in the blood-vessels—certain it is that irritability remains for a long time in the muscles. The author conceives that too much importance has been attached to the fluidity of the blood in its vessels, it being generally considered an evidence of violent death.

"Morbid productions and natural substances from other parts of the body are sometimes found in the blood-vessels. Purulent matter has been noticed in the veins, and sometimes also in other parts of the circulatory system. Pus has been known to circulate in the human frame." "Portal and Dupuytren have seen pus in the lymphatics surrounding an abscess." "Independent of the direct evidence of pus in the blood-vessels, we have indirect though not less decisive proof. The practice of surgery not unfrequently shews the removal of an abscess without external evacuation, and the deposit of matter far from its original seat."

"Besides the morbid states of blood, which are observable in its vessels, there are others of a peculiar nature known only by their effects. The blood appears to become actually poisonous." "Veterinary surgeons have propagated disease from horse to horse by the transfusion of blood." "In this way the fatal catarrh, called glanders, has been transmitted by Professor Coleman, and the 'malignant pustule' by Dupuy and Leuret. According to Doctor Hertwich, of Berlin, the blood of a rabid animal will, by inoculation, communicate the disease."

The effects produced on the system by various substances injected into the blood are then noticed. Air, when admitted into the circulation in considerable quantity, has caused death. Majendie has related some cases of this. Bichat injected into the blood ink, oil, wine, water coloured with indigo, and other substances. These, when received by the crural artery, produced torpor, sometimes paralysis but not death. Alcohol, when injected into the blood in large quantity, has produced death.

"More remarkable and important are the phenomena produced by the injection of pus or fetid matter into the circulation. On this point M.M. Gaspard and Majendie have made some very interesting statements. The former first injected into the jugular veins of dogs pus diluted with water. They became immediately agitated, made efforts at deglutition, then sunk faint, moaned and vomited. The bladder and intestines were emptied. Recumbent on the side, with respiration imperceptible, and pulse very feeble; they at length voided fæces liquid and extremely fetid. This afforded great relief, and either procured a speedy restoration of health, or was succeeded by dysenteric symptoms, exhaustion and death. When he encreased the quantity of pus injected, the nervous symptoms were sooner and more strongly marked, wanderings of the eyes, excessive sensibility, involuntary startings, hiccough, convulsions, and delirium. In one case a sort of emprosthotonos with stiffness of the limbs ensued at the end of fifteen minutes, on the injection of three drams of pus. Post-mortem examination exhibited, in less urgent cases, nothing remarkable, with the exception in one of partial hepatization of a portion of lung." **175.**

Our author is inclined to think that the principal impression, in all these experiments, was on the nervous system, and through it on the muscular system of organic life. He next notices the effect on the blood of certain articles taken by the stomach. Prussic acid is found to render the blood florid, and to hasten its concretion. Mercury is said by some "to possess the power of breaking down the crasis of the blood." Our author never observed such an effect produced by this mineral. Alimentary substances of bad quality, or deficient in quantity, produce a vitiated state of the blood; thus the use of herbs and uncooked roots among the poor has been found to produce dropsy. Scurvy is produced in crews by the exclusive use of salted provisions.

Our author having considered the principal changes observed in blood in its vessels, now turns his attention to those changes which analysis exhibits in it when obtained by venesection, in disease. He here makes some pertinent remarks regarding the important part performed by the fluids in disease, and the necessity of cultivating their pathology. "The *colour* of the blood in disease is of considerable importance. Its deep rich colour is reduced by hæmorrhage, for hæmatosine appears to be of less easy reproduction than the other constituents of blood." "Baglivi observed that the blood of venæsection had a bright scarlet hue in hectic patients." "Cholera, in its purple form, shews the darkened and depraved state of the blood."

"The *temperature* of the blood has been changed in some cases of disease. In fevers and internal inflammations, though the thermometer is not generally raised above 97°, many instances have occurred in which it has been elevated to 104°, 107°, and even 110°." The *specific gravity* of the blood is not much changed in disease. With respect to *coagulation*, the rapidity with which blood concretes is found to be proportioned to the debility of the individual—and this circumstance, as our author well remarks, is of considerable importance in a curative point of view, the first natural check to hæmorrhage being the formation of a clot on the mouth of the vessel.

From some experiments made to ascertain the effects of a tonic and atonic state of the system on the concretion of the blood, the author feels himself warranted in propounding the following opinion: "that the speedy occurrence of concretion on the effusion of blood, affords a reason sufficiently cogent for the discontinuance of depletory measures." Several pathologists have recorded cases of disease in which the blood when obtained by venæsection did not present any sign of coagulation whatever. Our author doubts the accuracy of these accounts.

> "The *firmness of the coagulum* of blood has been considered a distinctive mark of a tonic state of the system; its great tenacity, a characteristic of inflammation; and its looseness, a sure proof of debility." 192.
>
> "As the density of the coagulum has had a considerable effect in the treatment of disease, I shall advert to two or three points of fallacy on this subject. It is frequently found that serum is slowly exuded; and hence unless a due time elapse before examination, the coagulum is soft from the serum it contains. Here, upon the general principle, the practitioner would desist from further evacuations, concluding the system to be greatly reduced. Sometimes, also, from the adhesion of the coagulum to the side of the vessel, from the kind of vessel, or other causes, the separation of serum is prevented for many hours, yet, on the removal of such attachment, or on the division of the coagulum, the serum is effused, and the crassamentum becomes firm." "If however, on the division of the coagulum, at the expiration of from eight to twenty-four hours, there ensue no considerable effusion of serum, and the crassamentum remain extraordinarily firm, I believe that further depletion is fully warranted." 194.

The *proportions of serum and crassamentum* are also found to be considerably affected by disease. Our author's experiments incline him to state, that "acute disease reduces the proportion of serum;—in other words, increases the mass of crassamentum."

Considerable importance has been attached to the BUFFY COAT. It has been usually considered as an infallible criterion of the existence of inflammation.

> "In some cases the surface is concave, and this cupped appearance is greatest, I think, when the quantity of blood is small. In blood of a buffy constitution, the formation of the tunic is considerably affected by the mode in which the fluid is abstracted. A small trickling stream will prevent the appearance of the sizy tunic. The kinds of vessel in which the blood is received will also have an effect in altering its character." 201.

For some very interesting experiments on the subject made under the direction of Professor Recamier at the Hôtel Dieu, see this Journal for 1824. The buff-coat is generally observed in blood drawn during pregnancy. It is seldom observed in mucous inflammations. Some medical men think that the colour and figure of the buff are characteristics of the seat of the disease.

"We have found great diversity in the solid contents of the blood. Its thickness is sometimes diminished, much more frequently increased." "The proportion of solid contents in the blood is remarkably increased in almost all those diseases for which venæsection is prescribed." 208.

"The quantity of fibrine has been considered to bear a proportion to the acute character of the disease." "The quantity of fibrine bears probably a relation rather to the extent and nature of disease than to the state of the constitution. Where there is increased action without reduction of power, the fibrine, I believe, is not increased; but where these circumstances are conjoined, it is. Hence in second and third bleedings of the same patient, the blood frequently contains more fibrine than the first." 210.

We have been thus copious in our analysis of this work. The vast importance of the subject of which it treats, and our conviction of the great advantage to be derived to medicine from due attention being paid to this branch of animal chemistry, will serve as our apology, if apology were necessary. To the lamented author the profession is much indebted for having contributed this his mite to the illustration of the pathology of the fluids. The manner in which the work is executed, evinces no ordinary degree of patient industry. Whatever inaccuracies or deficiencies may be found in it, would of course have been corrected, had the writer been spared to revise and superintend this edition. We must not however let this opportunity pass without expressing our approbation of the manner in which the editor Dr. Wright has performed his part. The judicious annotations given by him enhance considerably the value of the book. We therefore feel no hesitation in recommending it to the perusal of our medical brethren.

## ANATOMICAL DESCRIPTION OF THE PARTS CONCERNED IN INGUINAL AND FEMORAL HERNIA, TRANSLATED FROM THE FRENCH OF *M. Jules Cloquet;* with Lithographic Plates from the original Etchings, and a few additional explanatory Notes. By *Andrew Melville M'Whinnie*, Assistant Teacher of Practical Anatomy at St. Bartholomew's Hospital. Octavo, pp. 50; 4 Plates. London, 1835.

WE are not in the habit of noticing at any length works exclusively devoted to anatomy. The majority of the readers of a periodical publication can scarcely be supposed to feel a strong interest in those recondite anatomical researches, which are properly appreciated, and indeed relished only by a few. Yet the character of the student and that of the practitioner are so inseparably mingled in the present day, that the line of distinction between them is vague, perhaps altogether undistinguishable. We mean that the period of study is necessarily spread over the whole of a professional existence, that none can stop and exclaim "ἒυρηκα," "the goal of our researches is attained." Every day discloses new facts or new deductions—

things which were unknown become familiar, and things which were familiar are clothed in new relations. It is the aim and object of periodical literature to diffuse this rising knowledge—to irrigate the profession with the fertilizing waters.

We are tempted to notice, and with some degree of circumstantiality, the present translation of the work of M. Cloquet, because a great deal has been done of late years in determining the anatomy of the parts concerned in hernia; and because a summary of what is actually ascertained, must be highly useful to those whose situation or whose means preclude the possibility of obtaining or of studying the many separate works or papers on the subject. Some surgeons regard the anatomical investigations of hernia with horror, others with contempt. The former are dismayed by the numerous parts with innumerable names—the latter consider the precision of the schools inapplicable or valueless in practice. We will not moot the question with either of these gentlemen; but indulge in the mild and not indefensible dogmatic assertion, that an exact acquaintance with the structure of parts in which many delicate operations are performed, can never be injurious, and must often be of service to the operator. We say exact acquaintance, for that loose kind of information which evades the difficulties it is too indolent to conquer, betrays rather than supports those who place their trust in it.

The translator of the present work observes of the original, that the estimation in which it is held by the most experienced anatomical teachers, affords his apology and his reason for presenting it to students in this country. For the same reason, and for that on which we have already been discursive, we shall place its substance before our readers. The surgeon in the provinces and in the colonies may con the laborious anatomical lesson with profit, and indeed with pleasure.

The parts concerned in inguinal hernia are described first, and those connected with femoral hernia are noticed last.

## INGUINAL HERNIA.

The parts described are successively these:—the aponeurosis of the external oblique muscle—the fascia superficialis—the obliquus internus muscle—the cremaster—the transversalis muscle—the rectus—the pyramidalis—the fascia transversalis—the epigastric vessels—the inguinal canal—the spermatic cord—the peritoneum. Such are the parts we are now to pass in review. On some we shall dwell fully, on others we shall lightly touch. It would be idle to repeat descriptions contained in all anatomical works, and we therefore select for notice the matter which is less accessible, and less familiar. We must crave permission to indulge in quotation, for descriptive anatomy is not easily condensed. Reversing the order adopted by M. Cloquet, we shall consider the fascia superficialis previously to the aponeurosis of the external oblique.

### *Of the Fascia Superficialis.*

The aponeurosis of the external oblique is covered by this fascia, which intervenes between it and the skin. The following are the results of careful dissections on the part of M. Cloquet.

"First being simply formed by a whitish and condensed cellular tissue, it covers the abdominal muscles and aponeuroses; it adheres but slightly to the latter, but it is so intimately connected with the muscles as to render their dissection difficult. Internally, it is continuous with that of the opposite side, by passing in front of the linea alba, from which it is separated with facility; externally, it passes to the crista of the ilium, becomes entirely cellular, and then covers the glutæus maximus and medius; in front of the abdomen it is difficult to ascertain the precise direction of its fibres; it contains the subcutaneous vessels of the abdominal parietes; inferiorly it passes in front of Poupart's ligament, to the external part of which it is rather strongly adherent. Surrounding the external abdominal ring without being firmly connected with it, the fascia superficialis extends upon the spermatic cord, to which it gives, as abovementioned, a thin cellular sheath, easily separated. and which accompanies it to the bottom of the scrotum. This sheath also embraces the tunica vaginalis and the testicle, and identifies itself lastly with a white and triangular fasciculus of fibres, which connect the latter organ to the scrotum and ramus of the ischium, (they are the remains of that structure which J. Hunter called the gubernaculum testis.) In many individuals this sheath is so thin that the fibres of the cremaster as well as the vessels of the cord which it surrounds may be seen through it. Two or three superficial arteries derived from the femoral, pass transversely, some in front of, others behind the cord to the root of the penis: they are contained in the substance of the fascia now described, and are accompanied by veins, which terminate in the femoral vein, through the opening in the fascia lata which gives passage to the vena saphena. On the inner side of the external ring, the fascia superficialis extends to the root of the penis, and is continuous with the loose cellular tissue by which the penis is surrounded.

Below the crural arch, the fibres of this fascia are very distinct; they are parallel to the bend of the thigh, and form meshes of considerable size, irregularly disposed, leaving spaces filled with fat or lymphatic glands. Externally it reaches the outer part of the thigh, and rests upon the surface of the fascia lata, which it also covers internally, and where it is fixed above to the ramus of the ischium near to the root of the corpus cavernosum.

The fascia superficialis passing in front of the aponeurotic opening for the vena saphena, adheres more or less intimately to its edge, and afterwards descends upon this vein, by which it is separated from the fascia lata." 4.

In fat subjects the fascia is thin and indistinct; in thin subjects it is thicker, whiter, and stronger.

### *Of the Aponeurosis of the External Oblique.*

Under this head we need only notice the manner in which the external abdominal ring is produced. The fibres of the aponeurosis of the external oblique separate near the pubes into two fasciculi, which are known by the name of columns of the inguinal ring. Of these columns, one is internal and superior; it is broad and flattened, and is fixed to the front part of the symphisis pubis, its fibres crossing those of the opposite side.* The other is external and inferior; it is of a rounded form, and much stronger than the internal column—it is attached to the spine of the pubes, and there is an extension of it to the crista of the pubes.† Between these two aponeurotic columns there is an aperture generally triangular, but varying considerably in its form and dimensions:—the ring of the external oblique or the inguinal ring. Its base* is formed by the pubes; its sides by the columns; its summit, situated superiorly and externally, is the point where the fibres of the aponeurosis of the external oblique separate into the two fasciculi. The summit is rounded in consequence of superficial aponeurotic fibres taking a transverse direction, and uniting the two columns which they cross at an angle more or less acute.

---

* These decussating fibres are continuous with the suspensory ligament of the penis.—*Eds.*

† This is described subsequently; it is the ligament of Gimbernat.—*Eds.*

These transverse fibres arise from the lower part of the crural arch, or the ligament of Poupart, where they are closely collected together; from thence they proceed in a radiating manner obliquely upwards and inwards towards the linea alba; a portion of them in front of the inguinal ring, which they narrow, and then become lost in the aponeurosis of the external oblique. In some individuals they are strongly developed, whilst in others they are very thin, or can scarcely be said to exist. In the female they are much weaker than in the male: they prevent the separation of the columns, and strengthen the lower part of the aponeurosis, which, indeed, is of greater thickness in this situation than elsewhere.

The great diameter of the inguinal ring is parallel to Poupart's ligament; so that the summit is towards the anterior superior spine of the ilium, whilst its base is towards the pubes. The circumference of the ring gives origin to a very thin cellular expansion,† which surrounds the cremaster muscle, and is soon lost upon the spermatic cord, by being confounded with the cellular covering, which the latter receives from the fascia superficialis; but from which it was at first quite distinct.‡

## *Of the Obliquus Internus Abdominis.*

We are not under the necessity of dwelling on the ordinary anatomical relations of the internal oblique muscle. The manner in which its aponeurosis divides, in order to constitute the sheath of the rectus, is of course familiar. But the sheath of the pyramidalis is not usually described. According to our author, it is formed anteriorly by the united aponeuroses of the external and internal oblique, and posteriorly by the layer derived from the transversalis. The anatomy of the lower border of the internal oblique and transversalis, a subject on which some doubt has been experienced and some difficulty exists, is thus given by M. Cloquet.

---

* The base is also known as the internal angle of the ring; and the summit as the external angle.

† "This cellular expansion constitutes the inner-columnar fascia of some authors; it is also represented as becoming the tunica aponeurotica of inguinal hernia."—*Translator.*

‡ "The inguinal ring is of less extent, and its columns are not so strong in the female as in the male. Sometimes it consists of a very small rounded aperture, closely embracing the spermatic cord or the round ligament; in other instances it has a very elongated form, and the spermatic cord passes out through its external angle and over the inferior column, at some distance from the pubes. In several subjects I have found the columns joining each other at a distance not exceeding one or two inches from the anterior superior spine of the ilium; the ring in such instances was of considerable size, and the oblique fibres which crossed it gave it a square form."—*Cloquet.*

> "The lower border of the transversalis, composed of very thin pale fibres, passes in a transverse direction above the spermatic cord, at the point where it enters the inguinal canal, that is, on a level with the superior opening of this canal internally, it is inserted into the lower part of the linea alba, and slightly into the pubes, by uniting with the aponeurosis of the internal oblique. The inferior edge of the latter, attached, as I have stated, to the crural arch, descends parallel to it, covering the spermatic cord in the inguinal canal, and is fixed inwardly to the pubes. It passes over the cord, just at the point where the latter escapes from the inferior opening of the inguinal canal. The fibres of the internal oblique there change their direction, to give origin to the cremaster—those fibres which were straight and nearly horizontal, become curved and vertical. They pass through the ring, and then, descending below it, form, in front of the cord, loops or arches, with their concavities directed upwards, and which may be traced to the bottom of the scrotum. The fibres are applied upon the whole of the anterior surface of the tunica vaginalis, and of the spermatic cord. These arches are of greater extent, inferiorly: occasionally one of them, single at its extremities, separates into two, towards its middle, and encloses a sort of crescentic space. They are all united, towards the external ring, into two triangular fasciculi. The one external, and the stronger, passes through the corresponding part of the aperture; the other, internal, and less developed, enters the ring, behind the inner column, to be attached to the pubes. This disposition, which is constant, has been but imperfectly understood by anatomists. The greater number have only described the external fasciculus of the cremaster; others have spoken only in a vague manner of the fibres which are inserted into the pubes. No anatomist, to my knowledge, has described those muscular arches which I have shown to exist in front of the spermatic cord; I therefore think it useful to treat this part of the anatomy in detail." 6.

The arches of the cremaster are with difficulty distinguished in front of the testicle and tunica vaginalis, and usually the muscle is insensibly lost upon the lower part of the proper sheath of the spermatic cord. In many subjects the arches of the cremaster are found behind the cord, as well as in front of it; they are much less distinct than the anterior.

M. Cloquet feels assured, from many dissections, that the cremaster does not exist antecedently to the period at which the descent of the testicle takes place. It arises from the testis sometimes passing under, sometimes through the inferior fibres of the internal oblique. The hernial sac, in descending, acts in a manner similar to the gubernaculum testis, and augments the number of the fibres of the cremaster at the expense of those of the internal oblique, which it draws down with it through the inguinal ring. From the consideration of these circumstances it must be evident, that the testis, as well as the sac of an external inguinal hernia, when it exists, are sustained on every side by the cremaster, and not merely on the outer, as the common descriptions of the muscle would imply. The external triangular fasciculus of the cremaster is usually stronger than the inner, or pubic. Occasionally the internal fasciculus appears deficient, in consequence of the length of its aponeurotic fibres; sometimes it would seem to be actually absent.

> "In the female, the lower fibres of the internal oblique are much thinner than in the male; they pass above the round ligament without entering the in-

guinal ring: in the natural and healthy state, therefore, we find no trace of cremaster.[*]

The cremaster muscle is covered by the prolongation of the fascia superficialis, which passes downwards upon the spermatic cord, and more immediately by an expansion of very fine cellular tissue, which extends from the circumference of the external ring, and which becomes intimately connected with the cremaster; it is also applied upon the proper sheath of the cord,[†] to which, inferiorly, it becomes closely connected. Superiorly, we may in most cases separate these two coverings from each other.

The inferior border of the internal oblique, is in many subjects, so confounded with the transversalis, that we cannot be certain that the cremaster does not receive fibres from the latter muscle." 12.

### *Of the Transversalis Muscle.*

On this head we find nothing deserving of attention.

Neither will the rectus nor pyramidalis detain us.

### *Of the Fascia Transversalis.*

Of this fascia we shall only advert to the portion which affords an investment to the cord and to a hernia. What is termed the superior opening of the inguinal canal, or the inner ring, is an elongated aperture, the great diameter of which is vertical, presented by the fascia transversalis, above and towards the middle of Poupart's ligament. Its internal edge, thicker and more strongly marked than its external, is sustsined by falciform fibres, detached from the arch itself. This orifice must not be considered as a simple foramen, but rather as the wide entrance to a funnel-shaped canal, which, in the male, receives the vessels of the spermatic cord, and of which it constitutes the sheath by extending over them. In the female, it gives passage to the round ligament of the uterus; it is of much smaller dimensions than in the male, and is sometimes with difficulty recognised. The sheath which it forms around the cord consists of a long cellular canal, easily separable from it, descending with the spermatic vessels through the inguinal canal, and accompanying them to the upper border of the testis, where it becomes lost in the cellular tissue which surrounds the tunica vaginalis. The prolongation in question of the fascia has received, as the translator observes, the various names of fascia canalis, fascia infundibuliformis, and tunica vaginalis of the cord. It has been described by some authors as constituting the fascia propria to the hernial sac.

Sometimes this cellular sheath of the cord, derived from the fascia transversalis is distinguishable from the laminated cellular tissue which unites the spermatic vessels, and which is derived from the external surface of the peritoneum: sometimes their separation is impracticable.

---

[*] "In the female, the sac of an external inguinal hernia, in its descent, frequently carries with it the fibres of the internal oblique and forms an accidental cremaster extended in front of the tumor, and the festoons of which, very pale, separated from each other, and scarcely visible from their thinness, unite into two triangular fasciculi at each angle of the ring, as in the male. A very careful dissection is required to discover these fibres, which are not equally developed in all cases. Often I have not succeeded in finding them."

[†] "This sheath originating from the fascia transversalis, is a prolongation c the sort of infundibulum which the latter presents, to form the superior openin of the inguinal canal."

The epigastric artery passes between the fascia transversalis in front and the peritoneum behind.

The following is M. Cloquet's summary of the anatomy of the fascia transversalis.

> "The fascia transversalis then, is an aponeurosis, which varying* in thickness, arises from the posterior edge of Poupart's ligament, from the fascia ilica, from the external edge of the tendon of the rectus muscle, and is continuous above with the cellular tissue situated upon the internal surface of the abdominal muscles; inferiorly and towards the middle of the crural arch it forms a membranous canal, which commences by a wide opening, directed posteriorly and externally, and of which the internal edge is much the stronger—this canal descends around the spermatic vessels to compose their proper sheath. The fascia transversalis supports the peritoneum behind, and is separated from it by the epigastric artery;† in front it corresponds with the transversalis muscle, and with the aponeurosis of which it is often so intimately connected, that it can only be distinguished from it by the different direction of its fibres." 17.

### *Of the Epigastric Vessels.*

We will not speak of the origin of the epigastric artery, nor of its usual course. The ordinary works upon anatomy are sufficiently explicit on these points. Yet there are three passages in the description of M. Cloquet to which we may usefully direct attention.

1. The relations of the artery to the inner ring are interesting and important. In general, says M. Cloquet, the epigastric artery runs immediately upon the internal border of the superior aperture of the inguinal canal, so that the spermatic vessels on entering this canal, appear at first sight to wind round this artery, but which in reality supports them only in a very trifling degree. If we remove this vessel, we find in front of it the internal border of the opening in the fascia transversalis, which, in fact, is the part which sustains the cord, and which prevents its being carried inwards. In some subjects the epigastric artery is situated at the distance of four or five lines to the inner side of this opening, and is not at all in contact with the spermatic vessels at the point where they form a curve to enter the inguinal canal. The situation of the umbilical artery varies considerably. Converted into a fibrous cord, it is in some instances situated immediately on the inner side of the superior opening of the inguinal canal; in others, it is at some distance from it. We may conclude therefore, first, that the spermatic vessels are always sustained internally by the inner border of the opening in the fascia transversalis; secondly, that in most instances the epigastric

---

* "The fascia transversalis is in some individuals extremely thin; in others, towards the rectus muscle, it is composed of very strong bundles of fibres, so disposed that open spaces, varying in form and number, are left between them."

† "The fascia transversalis possesses the greatest strength between the superior opening of the inguinal canal and the rectus muscle. In this situation it is opposite to the posterior part of the inguinal ring, from which it is separated merely by the thin fibres of the internal oblique and transversalis, which are attached to the pubes."

artery contributes to their support; thirdly, that in some cases the umbilical artery assists these two parts in maintaining the cord in its situation.

2. The relations to the outer ring should not be disregarded. Under ordinary circumstances the epigastric artery is placed at the distance of about an inch from the outer side of the external ring. But M. Cloquet notices the following exceptions to this, the usual location of the vessel.

When, however, the inguinal ring is of considerable length, its external angle, or rather its summit, is situate only a few lines distant from the epigastric artery. I will here observe, that the proximity of the external angle of the ring to the epigastric artery is consequent on, 1st, the deviation of the artery from its proper course, as caused by an external inguinal hernia inclosed within the canal; 2ndly, the elongation of this angle towards the epigastric artery, which retains its proper situation as from an internal inguinal hernia; 3dly, these two parts, in some cases appearing to become opposite each other, and which we frequently observe in large external inguinal herniæ, where the obliquity of the inguinal canal is destroyed.

3. The epigastric artery is well known to be situated on the outer side of the neck of the sac of a direct, ventro-inguinal, or, as M. Cloquet terms it, internal inguinal hernia. Our author's observations on this subject are of the following specific character. Before the artery reaches the rectus muscle, it forms the external boundary of a triangular space, the base of which is formed by Poupart's ligament, and the internal border by the rectus muscle. The extent of this space is proportionate to the distance at which the epigastric artery is placed from the symphisis pubis. Internal inguinal herniæ occur in the lower part of this triangular space, most frequently very near to the tendon of the rectus; it very rarely happens that the hernia is found on the outer side of the space, that is, near to the epigastric vessels.

We proceed, after considering the component parts of the inguinal canal, to examine the canal itself.

### *Of the Inguinal Canal.*

We will not pursue M. Cloquet through his accurate review of the component parts and the general characters of the inguinal canal. We will simply pause at one or two unconnected points.

1. It has been stated that the aponeurotic fibres of the external oblique where they form the *internal* pillar of the outer ring, decussate with those of the corresponding muscle on the other side of the abdomen, and become continuous with the suspensory ligament of the penis. But it should also be observed that the *external* pillar of the outer ring is brought into relation with the linea alba, and in this manner:—Radiating aponeurotic fibres ascending from the pillar in a diverging manner, to be attached to the lower part of the linea alba, after having passed behind the internal column of the ring. These fibres have received the name of the triangular fascia or ligament. Thus the internal pillars of the ring on either side decussate; and the external pillars are connected at the linea alba, by means of this triangular aponeurosis.

2. The external ring, or external opening of the inguinal canal presents much variety in the extent, form, and strength of the aponeurotic fibres which constitute its boundaries, and which must influence the dimensions of the inguinal canal, the amount of resistance offered to the viscera in their

protrusion, and the degree of strangulation which they may suffer. M. Cloquet appends a note expressing the result of his observations upon this point, observations which are not unimportant.

"I have already noticed many of the varieties in the formation of the inguinal ring; here I will observe that the extent of the inguinal canal bears an inverse ratio to that of its inferior aperture. In some subjects, the ring extending to the centre of the crural arch, the cord, as it passes out, is placed at some distance from the pubes; the inguinal canal, then, having a direction from behind forwards, is very short, and the testicle can easily re-enter it. Frequently the fascia superficialis is united so loosely to the parts adjacent to the inguinal ring, that when the testicle is pushed upwards, it may become placed between that fascia and the aponeurosis of the external oblique. In examining such a case, we might be led to believe, that the testis has introduced itself into the inguinal canal; but if the gland be pushed downwards again, we do not discover the large opening, which permits the easy introduction of the finger, and which is formed by the dilated inguinal ring in the few individuals in whom the testes can really re-enter the canal." 21.

3. The differences observed in the form and the dimensions of the inguinal canal in the male and in the female are not undeserving of attention.

The canal is wider, and its apertures are much more distinct in the male than in the female. Its direction, which usually corresponds with that of the crural arch, is also a little more oblique in the former than in the latter.* The occurrence of inguinal hernia is influenced by the differences in the dimensions of the inguinal canal, and which depend on the age and sex.

The following are the admeasurements offered by M. Cloquet. We may premise two remarks: 1, that it is rare to find two individuals in which the measurements exactly correspond; 2, that no obvious explanation can be found in the physical conformation, for the greater prevalence of herniæ on the right side than the left. To return to M. Cloquet's measurements.

| | MALE. | FEMALE. |
|---|---|---|
| " From the symphysis pubis | *Inches.* | *Inches.* |
| to the anterior superior spine of the ilium . . . | 5¾ . . . . . . | 6 |
| to the tuberosity of the pubes . . . . . . . . . | 1⅛ . . . . . . | 1⅜ |
| in the inner margin of the external abdominal ring . . . . . . . . . . . . . . . . . . . | 0⅛ . . . . . . | 1 |
| to the inner margin of the superior aperture of the inguinal canal . . . . . . . . . . . . | 3 . . . . . . | 3¼ |
| to the middle of the iliac artery . . . . . . . . | 3⅛ . . . . . . | 3⅜ |
| to the middle of the iliac vein . . . . . . . . . | 2⅝ . . . . . . | 2¾ |
| to the origin of the epigastric artery . . . . . . | 3 . . . . . . | 3¼ |
| to the point where the epigastric artery passes on the inner side of the superior opening of the inguinal canal . . . . . . . . . . | 2¾ . . . . . . | 2⅞"22. |

---

" * If a horizontal line be drawn on a level with the pubes, and an oblique one from the symphysis pubis to the anterior superior spine of the ilium, it will be found that in the female, these two lines will meet at a more acute angle than in the male, and which depends on the less degree of elevation and the greater breadth of the pelvis in the former: in the female, also, the crural arch is more horizontal. This difference, however, is not striking in many individuals."

The spermatic cord and the peritoneum, which form the two concluding subjects discussed by M. Cloquet in reference to inguinal hernia, present only one anatomical feature to arrest us. It is this. Towards the cavity of the abdomen, the point at which the spermatic vessels pass into the canal is marked by a conical depression of the peritoneum, which has the form of a little funnel, and frequently sends a prolongation in front of the cord. In the majority of subjects, however, the peritoneum, passes over the superior aperture of the inguinal canal without being extended into its interior. M. Cloquet has directed much attention to this depression in the peritoneum, a depression of some importance in connexion with hernia, and congenital hydrocele.

> " This little depression (says he) is occasionally situated at the distance of five or six lines to the outer side of the opening in the fascia transversalis. In many subjects I have discovered it lying in front of the spermatic vessels in the iliac fossa to which it had probably been drawn. In most instances this depression does not correspond with the apex of the pyramid formed by the larger of the two fossæ, which extends more internally. Occasionally it is continuous with a cellular filament, which consists of the remains of the tunica vaginalis, or more properly of its canal of communication with the peritoneum in the fœtus. I have met with the remains of the tunica vaginalis in male subjects of all ages ; and it is a singular circumstance that they should be nearly as frequently found in the old as in the young subject. The following are the principal varieties which have occurred to my observation.
>
> 1st. The little depression of the peritoneum adheres simply to the spermatic cord, in front of which it is always situated, through the medium of a dense cellular tissue which extends upon the cord in the form of a whitish filament, which becomes thinner and thinner, and is soon lost in the cellular membrane which unites the spermatic vessels.
>
> 2dly. The depression of the peritoneum is continuous with a long whitish cord, of fibro-cellular texture, which may be traced as far as the tunica vaginalis.
>
> 3dly. This cord, instead of being solid throughout its whole extent, presents at different points oblong sacculi, two, three, or four in number, separated from each other by contracted portions. These cavities usually communicate with each other by very narrow orifices, and will admit of inflation.
>
> 4thly. There exists often only one oblong cavity, of an inch or an inch and a half in length, either entirely contained within the inguinal canal, or projecting from it in a trifling degree, large at its fundus, and continuous with the peritoneum by a narrow neck, or sort of pedicle, which sometimes contains a small canal by which the cavity may be inflated, but which at other times is solid. In this case, the cavity does not communicate with the peritoneum, and represents a kind of cyst, which might be mistaken for the remains of a hernial sac. At the point where the pedicle is attached, the peritoneum presents a small cicatrix, more or less marked. The parieties of this cyst, and of the others just mentioned, are more or less thin, transparent, and elastic ; occasionally they are white, opaque, and easily torn ; their interior is moistened by serum, which may increase in quantity, and form encysted hydroceles of the cord.
>
> 5thly. I have many times seen the tunica vaginalis very much elongated, and extending upwards in front of the cord, into the inguinal canal, to become continuous with the depression of the peritoneum through the intervention of a solid cellular fasciculus.
>
> In all these cases, the tunica vaginalis is completely separated from the peritoneum ; it may, however, preserve a communication with that membrane. The depression which the latter presents is then continuous with a canal which is

either long and contracted at different points, or short and wide, and consists simply of the upper extremity of the tunica vaginalis. This canal allows the serum of the abdomen to flow into the tunica vaginalis, thus forming a hydrocele. Ii may also become thc sac of a hernial protrusion." 26.

This concludes the anatomy of inguinal hernia. To recapitulate would be superfluous, and we shall content ourselves with directing the attention of our surgical readers, to the observations and researches of our author. There are many parts of anatomy, which, for practical purposes, may be superficially remembered. But the study and the recollection of those connected with the greater operations of surgery, or, indeed, with the less imposing manipulations of it, can never be too minute and circumstantial. It is the possession of this elaborate description of knowledge which distinguishes, in the hour of difficulty and of need, the scientific and accomplished, from the routine operator.

We proceed to the anatomy of the parts concerned in femoral hernia.

## ANATOMY OF THE PARTS CONCERNED IN FEMORAL HERNIA.

M. Cloquet commences by a precise and correct description of the sinuous fossa comprised between the anterior superior spinous process of the ilium, and the spine of the pubes. Between those two points is extended the lower border of the aponeurosis of the external oblique, in other words, the ligament of Poupart, or the crural arch.* But the point of most consequence, because the most litigated, is the disposition of that expansion from the ligament of Poupart, usually known as the ligament of Gimbernat. M. Cloquet's account of this is valuable and perspicuous.

"In addition to the principal attachment of Poupart's ligament to the spine of the pubes, it also has an insertion into the crista of this bone by means of a fibrous triangular expansion, which is detached from its posterior part. This expansion has a direction almost horizontal in the upright posture of the body, so that it has an anterior border and rather superior, which is fixed to the crural arch; and a posterior inferior border, which is attached to the whole length of the crista of the pubes. Its base turned outwards corresponds with the iliac vessels; it is thin, rather concave, and is continuous with a fibrous lamina more or less strong, which I shall presently consider,—its summit is narrow and terminates at the spine of the pubes; this ligament, therefore, fills internally the triangular space between the pubes and the crural arch.

This expansion must not be considered as distinct from the crural arch; for, as the latter approaches the pubes, it increases in breadth, to be fixed to its spine and crista by means of this expansion, which appears to be reflected beneath the inferior column of the inguinal ring.

The ligament now described varies in dimensions; ordinarily its great diameter is from six to ten lines. Dr. Monro observes, that its strength is greater in the male than in the female, and to this he refers the comparatively rare occurrence of femoral hernia in the former; this observation, however, is not invariably correct: in some females I have found the ligament stronger and broader than in many males; in other instances, it has presented no differences in the two sexes. In some subjects this expansion of the crural arch is entirely cellular; in others, it does not even exist; occasionally it possesses considerable strength. It is almost constantly perforated by one or many small apertures for the passage of lymphatic vessels, at the point where it is continuous with the anterior wall of the crural canal, as will be afterwards seen.

---

* It may be well to inform our provincial readers, that anatomical description has of late years become more minute and more methodical.

A careful dissection of this ligament, which I shall call Gimbernat's ligament, will shew that it consists in most subjects of two distinct laminæ, easily separable above, but intimately connected below, to be inserted together into the crista of the pubes. Of these two laminæ, one is posterior and deep,—it is continuous with the fascia transversalis, and the tendon of the rectus abdominis; the other is anterior and superficial; and is continued into the inferior column of the ring. A correct knowledge of the structure of Gimbernat's ligament is obtained by dissecting it towards the inguinal canal." 30.

The disposition of the fascia iliaca, its connexion with the tendon of the psoas parvus, when that muscle really exists, and its continuity with the fascia transversalis, are matters which we must dispose of with this brief notice. But this we must observe, that the continuity of the fascia iliaca and fascia transversalis, where the iliacus internus muscle passes beneath the crural arch, occasions a fibrous cul-de sac, which constitutes a powerful means of preventing the escape of the viscera of the abdomen beneath the outer part of the crural arch.

The fascia iliaca, in passing to the thigh, forms between the crural arch and psoas muscles a border, which limits externally the superior opening of the crural canal, whilst Gimbernat's ligament limits it internally.

M. Cloquet dwells at considerable length on the crural canal, the passage through which femoral hernia proceeds, and analogous in this respect to the inguinal canal, which bears the same relation to the hernia of that name. A knowledge, then of the anatomy of the crural canal is absolutely necessary for an accurate acquaintance with that of the femoral hernia. We shall follow M. Cloquet, for we cannot materially abridge his statements.

### *Of the Crural Canal.*

"In dissecting the upper and anterior crural region, which might be called the inferior inguinal, we meet, in proceeding from without inwards, 1st, the skin; 2ndly, adipose cellular tissue, which, in some individuals, may form a layer of two inches in thickness; 3rdly, the fascia superficialis, of which I have already spoken; 4thly, beneath the latter, the fascia lata which in this region has two origins, each by a distinct layer. The two layers which constitute these origins are separated from each other; the one, anterior and superficial, is fixed to the inferior border of the crural arch, and passes in front of the femoral vessels; whilst the other, posterior and deep, glides under these vessels, to be attached to the pubes, covering the pectinalis muscle, and becoming continuous at the linea-ilio-pectinea with that portion of the fascia iliaca which descends in front of the psoas and iliacus muscles. These two layers, by their separation, form a fibrous canal, which I shall call the crural canal, giving passage to the femoral artery and vein, and containing also absorbent vessels and glands." 32.

M. Cloquet describes next the oval aperture in the fascia lata, through which the saphena major vein passes in for the purpose of joining the femoral. This aponeurotic aperture varies considerably as to its distance below Poupart's ligament, and also in its dimensions and form; in some instances it is separated from it by a considerable space, the extent of which is determined by the point where the vena saphena unites with the femoral vein. It is generally nearer to the crural arch in the female than in the male; its great diameter, which is vertical, is from six to ten lines in length; its small diameter is transverse, and measures about eight lines; its upper extremity, not very clearly defined, in some subjects, is separated from the crural arch by an interval of only three or four lines; in others, the distance amounts to an inch or an inch and a half. The inferior extremity is formed by an aponeurotic semi-lunar fold, strong and distinct, the concavity of which is directed upwards towards the crural arch, and is received into the angle formed by the junction of the vena saphena and femoral vein. This crescentic edge is continuous externally with that portion of the fascia lata which covers the outer part of the thigh, as also with the anterior layer of the fascia, which ascends to be attached to the crural arch. Internally, the crescentic edge is continuous with the posterior layer of the fascia lata, which, covering the pectinalis and adductor longus, is attached to the pubes; it is also continuous with the superficial portion of the same fascia which constitutes the anterior wall of the crural canal. We here distinguish clearly the separation of the fascia lata into two layers; one ascending obliquely inwards and towards the inferior border of the crural arch and the lower column of the external ring, and covering the femoral vessels, whilst the other takes a direction beneath them to be attached to the pubes.

"The superficial layer of the fascia lata crosses in some degree the direction of the deeper seated one; it dips beneath the crural arch to be continued into Gimbernat's ligament.* When the thigh is extended, and rotated outwards, the superficial layer of the fascia lata, composing the anterior part of the crural canal, is in the most complete state of tension; at the same time, the crural arch is stretched, and drawn downwards without producing much effect upon Gimbernat's ligament. By the flexion and rotation inwards of the thigh the opposite effects will be produced." 34.

M. Cloquet considers it as proper to view the crural aperture as a true canal for the transmission of the femoral vessels, as it is to deem the channel through which the spermatic cord passes out of the abdomen, an inguinal canal. As such, then, M. Cloquet methodically describes it. He takes in succession its superior aperture, its walls, and its inferior aperture. We are unwilling to omit the exact description, and we cannot essentially abridge it; we shall therefore give it unmutilated and entire.

"The superior aperture of the crural canal is situated above the pubes; it is triangular, inclines downwards and forwards, and presents three borders and three angles. One of these borders is anterior and superior; this is the longest; and is formed by the crural arch. The two others, are, one posterior and internal, the other, posterior and external.

The posterior and internal border is the shortest; it corresponds with the upper edge of the pubes, and with the deep layer of the fascia lata, which is attached to that part, and is here remarkably thick.

---

* "In some subjects the continuation of the superficial layer with Gimbernat's ligament, is entirely cellular; and the aperture of the vena saphena in these instances is of large size, and of an irregular form. The layer in question presents a large falciform edge, the upper extremity of which becomes contracted to be inserted beneath the inferior pillar of the ring: the lower extremity supports the vena saphena by its concavity."

The posterior external border is of an intermediate length, compared with the two preceding. It is formed by the expansion of the tendon of the psoas parvus, (pelvic aponeurosis), which descends beneath the crural arch, and accompanies the united psoas and iliac muscles.

Of the three angles, the internal is formed by Gimbernat's ligament; the external, by the concave aponeurotic fold, which is in the opposite direction, between the crural arch and the psoas and iliacus. The posterior is not clearly defined, and corresponds with the linea ilio-pectinea.

Walls of the crural canal.—This canal extends between the opening just described, and that which gives passage to the vena saphena. Its length varies, and depends upon the height at which this vein opens into the femoral; it measures from six to fifteen lines. Its direction is nearly vertical; it is triangular, and wider above than below. In the female it is a little shorter, but generally wider than in the male.

The crural canal presents three walls: the anterior extends from the crural arch to the upper part of the opening for the vena saphena, and is formed by the superficial layer of the fascia lata, which ascends in front of the femoral vessels; it is much stronger externally than on the inner side, where it is continuous with the deep layer of the same fascia, and with Gimbernat's ligament. It is covered by skin, subcutaneous cellular tissue, and fascia superficialis; it adheres closely to the latter at its lower part. In front of it also are absorbent glands, and the superficial vessels of the groin. It covers the femoral artery and vein, and usually sends between these vessels two fibro-cellular partitions, which form the sheath of the vessels, and are attached to the posterior external wall of the crural canal. On the inner side of the femoral vessels, and between the anterior and the posterior internal walls is the space, through which the sac of a femoral hernia escapes; this space, however, is closed superiorly towards the abdomen by a septum, presently to be described.

Of the two posterior walls of the crural canal, the internal is formed by the deep layer of the fascia lata; it is narrow, and covered a little externally by the femoral vein; in front, it is separated from the anterior wall by the space just mentioned. Small round apertures are sometimes found in it, for the passage of lymphatics. Internally, it is united with the anterior wall, and is also continuous with the fascia lata, covering the muscle on the inner part of the thigh.

The posterior external wall is slightly convex and narrow, and is formed by the aponeurotic expansion of the psoas parvus, which covers the psoas and iliacus muscles and crural nerve: the femoral vessels and lymphatic trunks rest upon it.

Inferior aperture.—The inferior aperture of the crural canal is formed by the opening in the fascia lata, which gives passage to the vena saphena. This aperture, already described in part, is oval, and not very clearly defined; it sends a fibro-cellular prolongation over the upper part of the vena saphena, and which is continuous with the fascia superficialis. Inferiorly, its edge is strong and well defined, and supports the angle formed by the union of the vena saphena and femoral vein. By its continuity with the fascia superficialis, which covers it, a sort of half-spiral turn is formed, which, however, is not equally manifest in all subjects. Besides the fascia superficialis, absorbent glands, varying in size and situation, are also placed in front of this aperture. It gives passage to lymphatics and to subcutaneous arteries and veins belonging to the genital organs, and to the integuments of the groin and abdomen. Below it, the fascia lata passes externally upon the sartorius muscle, to which it furnishes a sheath; internally, it extends upon the adductor longus." 37.

From the foregoing description it will appear, what is the fact, that different portions of the crural canal exhibit different axes. The axis of the superior aperture of the canal, resting on the pubes, is downwards and forwards—that of the canal itself is vertical—and that of the inferior aperture is again directly forwards, corresponding, in fact, with the axis of the aperture for the vena saphena. An acquaintance with these facts is indispensably required, in order to know the course of crural hernia, and the best means of applying the taxis.

The external iliac artery and vein, in their transit through the crural canal, rest upon its two posterior walls, but chiefly on its posterior external. They are confined by two laminæ stretched between the anterior and posterior walls of the canal; one placed between the artery and vein: the other on the inner side of the latter, and lost in the surrounding cellular tissue, and in the septum which closes the entrance of the crural canal. The second lamina separates the sac of a crural hernia from the crural vein.

We cannot refrain from inserting the results of our author's observations on the obturator artery. They establish a broad result, highly interesting to the scientific surgeon.

> "The epigastric artery often arises by a trunk, which is common to it and to the obturator; the latter vessel, however, more frequently is furnished by the hypogastric itself, or one of its branches, and has then no connexion with the crural canal. When there exists a common trunk for these two vessels, they usually separate from each other on the outer side of the superior aperture of the crural canal: occasionally, however, on its inner side, but rarely below that opening. In the first case, the obturator artery takes a direction downwards and inwards towards the thyroid foramen, and is completely on the outer side of the superior aperture of the crural canal. In the second case, this artery descends almost vertically behind the superior aperture, its proximity to Gimbernat's ligament then depending upon the length of the common trunk. Lastly, in the third case, the common trunk passes into the crural canal, or, perhaps, takes its origin within it, and the two branches derived from it re-enter the abdomen; the obturator artery more or less tortuous, ascends, and turns over the upper border of the pubes into the cavity of the pelvis, towards the thyroid foramen; the epigastric artery turning underneath the crural arch, then runs upwards and inwards towards the rectus muscle. These varieties in the origin of the obturator artery, determine its relation to the sac of a crural hernia."*

Some other varieties of the origin of the obturator are observed. We need not allude to them more in detail. The only remaining point which we shall notice is the septum crurale, a name applied to the cribiform fascia of Sir Astley Cooper.

> "The superior orifice," says he, "of the crural canal is closed by a membranous septum, which tends to prevent the occurrence of femoral hernia, and opposes the entrance of the finger when we endeavour to introduce it from above

---

* I have studied with much care the relations which the epigastric, obturator, or their common trunks may have with regard to the crural canal; I have drawn and described the most interesting varieties in these arteries, both in the healthy state and in crural hernia; further, I have endeavoured to establish, in a given number of subjects, the proportion in which the obturator artery arises from the hypogastric, from the external iliac, or from the epigastric; with that view, I have examined these vessels in two hundred and fifty subjects, the half of which were males. The following were the results obtained:—

downwards, beneath the crural arch. This septum constitutes, in some subjects, a sort of fibro-cellular partition, of a very firm and resisting nature; in others, it is of a thin cellular structure, and easily yields to the pressure of the finger. I propose to give it the name of Septum Crurale. The following is its usual disposition:—it arises from the circumference of the superior aperture of the crural canal; it is tolerably thick; its fibres are generally transverse anteriorly, and towards the crural arch; internally it is derived from the cellular tissue, behind Gimbernat's ligament, and, perhaps, even from the concave edge of the latter, conjointly with the anterior boundary of the crural canal; externally it is confounded with the sheath of the femoral vessels, and with the cellular tissue which surrounds the epigastric artery. On the outer side of this artery we find also that the interval between the crural arch and the femoral vessels is filled with cellular membrane.

The upper surface of the Septum Crurale is towards the abdominal cavity; it is concave; the inferior, directed towards the crural canal, is convex: each surface is, however, sometimes level. This septum is always perforated by small apertures for the passage of lymphatics, and which are sometimes so numerous, that the superior part of the canal appears to be closed simply by a fibro-cellular net-work. One of these apertures, more considerable than the others, is central, and is sometimes occupied by an elongated absorbent gland; it is sufficiently large to admit the point of the little finger, which, when introduced, will be girt by it as by an elastic fibrous ring. Internally, another tolerably large foramen is also sometimes found, near to Gimbernat's ligament." 41.

Here we close the subject and the volume. The importance of the former

---

| | | | |
|---|---|---|---|
| Obturator artery, arising from | 1st. Hypogastric on both sides . . . in | 160 subjects, | 87 males.<br>73 females. |
| | 2nd. Epigastric on both sides . . . in | 56 subjects, | 21 males.<br>35 females. |
| | 3rd. Hypogastric on one side; from the epigastric on the other . . . . . . . . . . . . in | 28 subjects, | 15 males.<br>13 females. |
| | 4th. The femoral . . . . . . . . . . in | 6 subjects, | 2 males.<br>4 females. |
| | Total. . . . . . | 250 subjects, | 125 males.<br>125 females. |

The following is the relative proportion of cases in which the obturator has or has not a relation with the hernial sac—placing on one side the cases of obturator arising from the epigastric, or directly from the femoral; and on the other, those arising from the hypogastric, we find

| | | | |
|---|---|---|---|
| Obturator artery arising | From the hypogastric. . . . . . . . in | 348 subjects, | 191 males.<br>157 females. |
| | From the epigastric or femoral . . . in | 152 subjects, | 58 males.<br>94 females |
| | Total . . . . . . . | 500 | |

From this calculation we find, 1st, that the cases in which the obturator takes its origin from the hypogastric are the most numerous; that their proportion, when compared with those in which it arises from the epigastric or femoral, is nearly as three to one. 2ndly, That the obturator appears to arise more frequently from the hypogastric in the male than in the female."

has induced us to depart from our usual custom, in directing so much attention to the latter; and, to the young and the old scientific anatomist and surgeon we earnestly recommend the study of both.

## Clinique Medicale, ou Choix d'Observations recueillie a l'Hôpital de la Charite'. Par *G. Andral*, &c. Deuxieme Edition, révue, corrigée, et augmentée par l'Auteur. Tome V. Maladies de l'Encéphale. Londres : Dulau, Soho-square.

We have to apologize to our readers for having delayed, till now, our notice of the present volume of M. Andral's valuable work. In the former edition of the Clinique Médicale, it will be recollected that our author dedicated a volume to the subject of fevers. This he has not done in the present edition; all the cases, however, formerly contained under that head have been still retained, but differently arranged, some being referred to diseases of the abdomen, and some to the class of cerebral diseases. Thus the facts, though differently interpreted, still remain the same. From this change in the arrangement, we are inclined to suspect that M. Andral has joined the ranks of the Broussaiists—at least that he has renounced the doctrine of the essentialism of fevers. Whether he is right or wrong in having done so, we shall not now stop to enquire. We have already expressed our opinions on that subject freely, fully, and candidly. That any serious mischief can result with respect to the treatment of disease from thus localizing fever, particularly in this part of the world, where, whether from the nature of our climate, or habits of the people, or both, almost all febrile disturbance is followed by some local inflammation, we do not at all apprehend:—That Broussais' doctrine may have done some service in the treatment of fever, if in no other way than by inculcating the necessity of caution in the use of powerful emetics and drastic purgatives, and by frequently directing attention to the destructive effects of the calomel and jalap system, we are most willing to acknowledge—but what we do say, and what we think cannot be said too often, is this, that Broussais' doctrine, as well as the doctrine of all those who look for the causes of disease exclusively in organic lesion, no matter whether of the brain, lungs, or intestinal mucous membrane, must unavoidably narrow and restrict the views of the pathologist, and prevent the mind from ever extending its researches beyond the limited precincts of mere morbid anatomy. Thus the field of chemical pathology, which, if cultivated, holds out the most flattering hopes to the zealous investigator of disease, has been almost entirely neglected. We trust, however, that the æra is fast approaching, when due attention will be paid to the alterations produced by disease in the nature of the fluids of the body. To the exertions of such men as Berzelius and Prout, in this department of pathology, the profession is already much indebted. Were proofs necessary of the inadequacy of mere morbid anatomy to account for the phenomena of disease, we have it in abundance in the very volume we are now about to analyze. M. Andral says, p. 119—"Ce que vous voyez sur le

cadavre ne peut donc pas toujours vous apprendre ce qui a eu lieu pendant la vie, et l'anatomie pathologique ne nous donne certainement le dernier mot, ni de la nature des maladies, ni de leur siége, ni de leur traitement."

The present volume, which now appears for the first time in a separate form, treats of diseases of the encephalon. It is divided into three books: the first contains diseases of the encephalic membranes—the second, diseases of the cerebrum—and the third diseases of the cerebellum. Each book again consists of two divisions, the first containing cases to illustrate the phenomena and treatment, and remarks on the several particulars regarding the disease; whilst the second division consists of general deductions from the facts recorded in the first part, and exhibits a resumé of those results which the experience and observation of the author suggested. With the former of these divisions it is our intention to be very brief, and after noticing a few of the more striking cases, we shall pass directly to the consideration of those general results, the perusal of which is much more calculated to excite the interest and awaken the attention of the practical physician.

## DISEASES OF THE DURA MATER.

CASE 1.—*Fibrous Growth developed on the Internal Surface of the Dura Mater—considerable Depression of the Points of the Cerebrum corresponding to this Growth—Hemiplegia—the Intellect perfect—Headache of long standing.*

A military man, 61 years old, entered the Hôpital de la Charité in the commencement of the month of March, 1820. He appeared to have been originally of a good constitution; but at the time he presented himself for admission, he was very much reduced in flesh; countenance pale, approaching to a yellow. The right eyelid continued depressed by one-half before the globe of the eye, nor could it be completely raised by the patient at pleasure. The mouth quite straight, as was the tongue, which also was capable of being protruded without difficulty. Intellect perfect. The upper and lower extremities of the right side were deprived of the power of motion, and their sensibility also gone. The urine was voided involuntarily: pulse very slow (scarcely fifty); no appreciable disturbance in the organs of digestion and respiration.

This person stated that, after having for a long time suffered rheumatic pains in different parts of the body, he was seized towards the commencement of the year 1817, with a headache, seated principally about the anterior part of the left parietal bone. This pain was at first intermittent; it then became continued for an entire year; and finally, from the middle of the year 1819, it disappeared altogether. For a long time, the patient complained of no other disturbance in his general health, except this headache, which, at times, became insupportable. At the period nearly when it ceased, the upper extremity of the right side appeared to him somewhat more insensible than the left; from time to time, the fingers of this side seemed deprived of all feeling; they were cold, and presented usually a violet tint; by degrees, he became unable to hold any thing firmly in the right hand. Subsequently, the upper extremity of this side became completely paralysed, at the same time that the left lower extremity gradually lost the faculty both of sensation and motion.

The state of the patient underwent no change during the first ten or twelve days after his entering the hospital; but then his tongue became dry, pulse frequent, and his ideas confused; diarrhœa came on; a large eschar formed on the sacrum, and the patient sunk towards the end of March, in an adynamic state.

*Post mortem Examination.* The vault of the cranium being raised, no appreciable lesion was found on the external surface of the dura mater. But when this was cut into for the purpose of examining the brain, it was found that, not far from the anterior extremity of the left hemisphere, it had contracted unusual adhesions to the subjacent parts. These adhesions were formed by cellular bands, which united the two layers of the arachnoid to each other. These bands circumscribed a spherical body of the size of a large nut, which sank deep into the cerebral substance, to which, however, it did not adhere, being separated from it by a cellulo-vascular structure, which seemed to be the tissue of the arachnoid and pia mater, compressed by it. This body was attached by a small pedicle to the internal surface of the dura mater; the fibres of this membrane were lost on the pedicle of the tumor, and could not be distinguished from its own proper tissue; this tissue, which possessed considerable hardness, and a white tendinous appearance, was formed of fibres closely packed together; they seemed to be a continuation of the fibres of the dura mater. The cerebral substance in contact with this tumor presented all its usual appearances. The other parts presented nothing very remarkable, except that the mucous membrane of the stomach, of part of the ileum, and of the colon, presented a bright red colour.

*Remarks.* The cerebral lesion, whose existence one would be most inclined to suspect in this case, both from the symptoms and progress of the disease, was unquestionably softening. At no period, however, was there observed that contraction of the limbs, which so often accompanies softening of the cerebrum; still it is one which frequently does not occur, and at other times is a symptom so transitory, that the patients themselves scarcely recollect to have felt it. The rheumatic pains which preceded the headache might have induced one to consider the latter, also, as depending on rheumatism. There is not a doubt but that pains of the head, similar to what occured in the case now in question, have been taken for a consequence of neuralgia or rheumatism. This headache was here the first symptom, and it coincided, probably, with the commencement of the disease of the dura mater, and must have continued all the time that the inflammatory process, necessary for the formation of the adhesions which were discovered after death, was going on in the arachnoid around the tumor; and it probably ceased, when the transformation of these adhesions into cellular tissue was complete. The gradual manner in which the paralysis developed itself is conformable to the nature of the affection; it was not preceded by any loss of consciousness. No lesion explained the incontinence of urine. The injected state of the stomach, and of a part of the intestine, coincided, in this case, with the adynamic symptoms under which the patient sank.

CASE 2.—*Osteo-fibrous Tumor, of the Size of a small Pullet's Egg, developed on the internal Surface of the Tentorium Cerebelli, to which is* *adheres closely.* ***Hemiplegia****, with convulsive* ***Movements*** *at* ***Intervals****, of the* ***Side*** *opposite to where the* ***Tumor*** *exists.* ***Atrophy*** *of the* ***Lobe*** *of the* ***Cerebellum*** *corresponding to the* ***Tumor****.* ***Death*** *by* ***Cerebral Hæmorrhage****.*

A shoemaker, 47 years old, addicted to the use of alcoholic liquors, fell on the occipital bone one day that he was intoxicated, about four years before entering the La Charité. Immediately at the time of the fall, he experienced no uneasiness: he subsequently began to complain of a dull pain towards the left side of the occipital bone; considerable giddiness of the head occurred from time to time, which was sometimes attended by a momentary loss of consciousness. At a later period, of a sudden, the upper extremity of the right side became the seat of a violent and painful shock (secousse), as if tetanic. Five or six of these shocks succeeded each other rapidly, and for the three or four days following, the right arm remained benumbed, and rather weaker than that of the opposite side. At first, there were intervals of several months between these attacks; they afterwards returned more frequently, and at last re-appeared every ten or twelve days, constantly confined, however, to the right arm, and at the same time paralysis of this limb, at first temporary, became permanent. Gradually, the lower extremity of the right side also lost the power of motion; the giddiness of the head became so annoying, that he determined on entering the hospital. At this time his state was as follows; face and eyes injected—considerable embarrassment in his articulation—memory quite good—tongue straight, and put out with ease—mouth straight. Both sides of the face possess the same sensibility and the same power of motion. Complains of a dull pain towards posterior part of the head, both on the right and left side; the two extremities of the left side cannot move at the will of the patient—they have however, a certain degree of stiffness: pulse slow, but remarkably hard; impulse of the heart strong; the digestive functions seem perfect; tongue broad, moist, and free from redness: considerable embonpoint, and the muscular system still well-developed. On his admission into the hospital, when we were just about to bleed him, he was seized with all the symptoms of apoplexy, and died the following day.

*Post-mortem Examination.* In the site of the left part of the tentorium cerebelli, there existed a large tumor, which, on the one side, pressed the posterior lobe of the cerebral hemisphere of this side, and, on the other side, compressed the cerebellum. The structure of the cerebral hemisphere was not at all changed. The left lobe of the cerebellum was singularly diminished in volume, at the same time that its substance became unusually hard. Neither the cerebrum nor cerebellum were continuous with the tumor. The structure, &c. of this tumor resembled very much that described in the preceding case. The right hemisphere of the brain was the seat of a great effusion of blood, which, occupying at once the corpus striatum and optic thalamus, forced its way into the lateral ventricles through the septum, which was torn. The parietes of the heart were hypertrophied.

*Remarks.* The seat of the tumor in this case, as well as in the preceding, was in the dura matter, but in different points of it; in the present instance, it compressed the cerebellum, one of the lobes of which underwent considerable atrophy. Still none of those peculiar functional disturbances, which, according to authors, are dependent on lesions of the cerebellum, were here observed. No symptom here manifested itself, but what would have been observed had the seat of the tumor been in one of the hemispheres of the cerebrum. The paralysis occurred in the limbs opposite the side of the cerebellum wasted away by the tumor.

## OBSERVATIONS ON DISEASES OF THE ARACHNOID AND PIA MATER.

There are few diseases, whose symptoms present as many varieties, as acute inflammation of the meninges. Are there any well marked signs, by the aid of which we may readily distinguish, during life, inflammation of the membranes covering the upper surface of the brain from inflammation of the membranes lining the lower surface of this organ? Are there any specific functional disturbances appertaining to inflammation of the membrane lining the ventricles? by what signs may we recognize inflammation of the membranes covering the medulla spinalis? Whatever be its seat, can acute meningitis be distinguished by its symptoms, either from the other acute affections of the encephalon, in which this organ is found materially altered. or from the very frequent cases in which irritation of the brain, or of its membranes, purely sympathetic of irritation existing in some other organ, leaves no trace of its existence after death? In fine, what are the anatomical characters in the dead body, by the aid of which we can assert that there has really been acute meningitis in the cases where, during life, those symptoms existed which seemed to appertain to it? Such are the questions still undecided in medical science, to the solution of which our author thinks that the observations given by him may serve to contribute.

### CASE 3.—*Effusion of Blood between the Arachnoid and Dura Mater.*

A coachman, 73 years old, of a strong constitution, had fallen from his seat nine years previously, and received a deep cut in the left temporal region. For this he was trepanned at the La Charité, since which he enjoyed perfect health. On the 20th March, 1832, he felt, without any known cause, in the right lower extremity, and in the arm of the same side, a numbness, with some difficulty in moving these limbs, pains in the elbow and ankle. At the same time he complained of vertigo, tinnitus aurium, headache and drowsiness. These symptoms gradually increased, and at last he became unable to attend to his usual business. Three days before entering the hospital, he began to feel some difficulty in moving the left lower extremity. He entered the La Charité on the 6th of April, 1822, when his state was as follows: obstinate constipation—tongue natural—the two extremities of the right side were still capable of performing some motion, but very feebly. The left lower extremity was somewhat weaker than the right—pulse full and strong. On the 8th, delirium set in. On the 9th, headache less, but the paralysis more marked, which continued gradually to increase. On the 13th, face very much injected; great drowsiness; hemiplegia of the left side incomplete—that of the right side almost complete; tongue red and dry; alvine and urinary discharges involuntary; pulse strong and frequent. 14th. The respiration stertorous—total loss of consciousness—coma, and in the evening, death.

*Post-mortem Examination*, 12 *hours after Death.* The arachnoid, thickened and red, was detached from the dura mater by effused blood, partly fluid and partly coagulated, which had completely dissected the serous membrane from above downwards, from the part contiguous to the great falx of the dura mater, to the temporo-parietal suture. *The effusion was greater on the left.* The depression of the hemispheres was nearly an inch on the left—only half an inch on the right. The sinuses contained a considerable quantity of blood.

*Remarks.* We here have a rare case of pathological anatomy; it is not easy to conceive how a delicate membrane, such as the arachnoid, can be separated from the dura mater by effused blood, without being torn. The predominant symptoms at first were in reference to the power of motion; there was double paralysis, as there was double effusion.

Case 7.—*Meningitis, confined to the Anterior Extremity of each Cerebral Hemisphere. Rosy Tint and some Softening of the Subjacent Grey Substance. Follicular Enteritis, proceeding towards a Cure. Symptoms of Ataxic Fever.*

This was the case of a boy, 17 years of age, who entered the La Charité on the 18th of February, 1824, with symptoms of slight continued fever; headache; tongue white and moist, slightly red at the tip and edges; thirst considerable; abdomen soft, and free from pain; constipation. For five or six days no change; but, on the 24th, there was observed an extraordinary look of distraction in the patient's countenance. On the day after, stupor was noticed; pupils dilated; tongue natural; pulse small and frequent; skin hot.—Twenty leeches to the neck. The stupor continued—extreme dilatation of the pupils, and then a remarkable sensibility of the skin. On 1st of March, more leeches to the neck, and blisters to the legs. Died on the following night.

*Post-mortem Examination.* Fulness of the veins on the convexity of the cerebral hemispheres. The pia mater covering the anterior extremity of each hemisphere very much injected, with the other changes mentioned at the heading of this case.

*Remarks.* Here was a case, where the inflammation of the membranes existed only in a very small extent of the external surface of the brain; the pia mater was injected only towards the anterior and superior part of each hemisphere; and in this same part, the grey substance of the convolutions participated, in some measure, in the irritation of the membrane covering them. And this is all that was found to account for the serious nervous disturbances which appeared towards the close of the patient's life. No doubt, however, but he died in consequence of the lesion of the nervous centres. But the entire of the disease did not reside there; when he entered the hospital, there was not the smallest appearance of their being affected; he merely had slight continued fever, without any well-marked local symptom; at that time the intestine was affected; the post-mortem examination shewed, however, that the enteritis was proceeding to a cure.

Case 12.—(p. 30.)—*Abuse of Alcoholic Liquors—Pleuro-pneumonia at first—Febrile Delirium—Purulent Infiltration of the Subarachnoid Cellular Tissue of the Convexity of the Hemispheres.*

This was the case of the driver of a cabriolet, 48 years old, who was addicted much to alcoholic liquor. He entered the La Charité on the 25th Sept. when he complained of a pain below the left breast, behind and low down on the side; in this part, a well-marked crepitating râle was heard. Cough and expectoration frequent; considerable fever; was bled from the arm, and leeched. On the 26th there was some amendment; but, on the 27th, he suddenly became delirious. This delirium still continued on the 29th, with pulse small and moderately frequent—tongue natural. The history of the case inclined us now to consider this affection to be delirium tremens, and we accordingly decided on the inutility of revulsives. We then had recourse to large doses of opium; 96 drops of Rousseau's laudanum were given in two doses. After taking the second dose, he fell into a tranquil sleep till the following morning, when he awoke, at the time of our visit, with his intellects quite clear; he fell asleep again. On the first of October, his reason still quite clear—face red, and pulse frequent—skin hot —the crepitating râle still heard on the posterior and left side of the chest; this state of the lung might account for the existence of the fever. The opium was now withheld. On the 4th, the fever again returned, the pulse became once more frequent, and the delirium manifested a disposition to return: however, all the unfavourable symptoms disappeared after a little time, and the patient appeared convalescent, and nearly fit to leave the hospital, when, on the 9th, the intellect again became disturbed; and though opium, and blisters, and sinapisms were employed, no amendment took place. On the 20th, the tongue, for the first time, lost its natural appearance: it became red and dry. All the symptoms continued to grow worse, and he died on the 27th.

*Post Mortem.* A turbid, milky liquid infiltrated the subarachnoid cellular tissue of the convexity of the hemispheres. The lateral ventricles contained a small quantity of limpid serum. Cellular bands united the pleura costalis and pulmonalis on the left side. A great quantity of colourless, frothy serum oozed out from the tissue of the lungs; this tissue retained the pressure of the fingers, like an œdematized limb.

*Remarks.* When this patient entered the hospital, he presented all the symptoms of pleuro-pneumonia. The inflammation was quickly met by active antiphlogistic treatment. Other symptoms then appeared, and suddenly a delirium supervened. For this, whilst the fever was still high, nearly 100 drops of Rousseau's laudanum was administered, in two doses; this practice was justified by the success which we had more than once found to attend the employment of opiates during the course of any other disease, in individuals addicted to spirituous liquors. The sudden improvement in this patient also seemed owing to the opium; he obtained sleep—his delirium and fever left him, and he seemed to be going on in a very satisfactory manner. Again the delirium and fever returned without any assignable cause; the good effects obtained from the opium in the first instance induced us to employ it again, but in a very small dose; and, whether it was owing to this circumstance, or that the functional disturbance of the brain was beyond the power of opium, the cerebral symptoms became every day worse, and in seven days from their first appearance the patient died. Now it is probable, that it was during these seven days that the alteration took place in the meninges. The milky infiltration of the pia mater was evidently the result of an inflammatory process in this membrane. Was it already inflamed at the time that the opium succeeded in putting a stop to the delirium? Yet how conld opinion check or remove a sanguineous congestion of the cerebral membranes, when we know that, if given in a certain dose, it most commonly produces such a congestion, or at least symtoms which are explained by this congestion? However, it is not necessary that congestion should have existed in the membranes in order to produce the delirium, which was removed by the first dose of opium. Delirium has been frequently observed, in cases wherein, after death, there were no such lesion found as meningeal congestion, no lesion, at least, appreciable to the morbid anatomist. M. Andral here asks whether opium, which is so injurious when once the sanguineous congestion is established, may not be then employed; and whether, if administered to an individual whose brain is no longer in is normal state, it does not lose the property of exciting the congestion which it would give rise to, if the brain were in its healthy state. He thinks it probable, that if the opium, in this case, had been administered in as large a dose the second time as it had been at first, the moment the delirium began to re-appear, the nervous symptoms would have been removed the second time also.

CASE 21.—(p. 59.) This is the case of a man, 50 years of age, who entered the La Charité with considerable anasarca and ascites. No sign of organic disease of the heart was detected; respiration not embarrassed; never complained of any pain in the right hypochondrium. He told us that the swelling had commenced about three months previously. After having been about a fortnight in hospital, he was observed one morning to be deprived of sense and motion, and in a strictly apoplectic state; face pale, eyes sightless, pupils very much dilated, pulse not frequent, respiration hurried and stertorous. He died some hours after the visit.

*Post-mortem.* Great serous infiltration of the extremities. A moderate quantity of limpid serum infiltrated the subarachnoid cellular tissue of the convexity of the brain. The two lateral ventricles were confounded with the third, with at least two glasses-full of limpid serum, transparent as crystal. Lungs sound, as also the heart. A considerable quantity of limpid serum in the abdomen

*Remarks.* The destruction of the septum appears to have been the result of mechanical pressure, made on it by the serum contained in the ventricles. This case comes strictly under the class of serous apoplexy. The patient, when entering the hospital had no other disease, but dropsy, the cause of which was then obscure, but which was after death accounted for, by the morbid condition of the liver. This individual had then a disposition to serous effusions, when suddenly, no doubt, the serous membrane lining the parietes of the cerebral ventricles exhaled a large quantity of serum, which produced all the symptoms of genuine apoplexy. In the same way, in some dropsical patients, great dyspnœa has been observed to come on suddenly, and death follows the constantly-increasing difficulty of respiration. The cause of this was found to be an effusion of serum, which took place suddenly into the pleuræ. In this case, neither the anasarcous infiltration nor the ascites were diminished by the effusion into the ventricles. In another case described by M. Andral, the abdomen was thoroughly emptied, and the limbs unloaded of all serous infiltration, a very short time before symptoms of apoplexy manifested themselves, which symptoms were produced as in the present case, by a sudden effusion of serum into the ventricles.*

CASE 28.—(p. 80.)—*Spinal Arachnitis—Arachnitis of the Base and Convexity of the Brain.*

This was the case of a woman, 28 years of age, the mother of four children; her feelings had been very much affected by some gross insults that had been offered to her; her menses were suddenly suppressed, and she was seized with a violent shivering. The following day, great heat of skin—a feeling of constriction at the throat—globus hystericus—bilious vomiting. On the fourth day the hysterical symptoms disappeared. She then entered the La Charité, when she presented the following state:—Face flushed—eyes very bright, and, as it were, very animated—neck swollen—head bent back—trunk flexed to one side, and cannot bend forward without great pain—continued pain all along the vertebral column, which is aggravated by the slightest motion—respiration difficult, and accompanied with panting—skin hot and dry—tongue natural—abdomen soft and free from pain—constipation. She was leeched and blistered repeatedly, which at first seemed to do her some good—the blood, on every occasion, was inflamed; however, all her symptoms subsequently became worse—the pain of head and back became very acute—her features quite altered—her answers to questions slow and uncertain—pulse small and quick—respiration short. On the 10th day from the attack, a cold and clammy sweat broke out on the face—eyes insensible to all external impressions—no sensation of pain produced by pinching the skin—subsultus so great that the pulse could not be felt—violent trismus—death.

*Post Mortem.* The spinal canal being opened, and the dura mater divided, a layer of whitish, opaque matter was found extended all along, from the occipital foramen to the sacrum; on pressing this with the finger, a turbid liquid flowed into the cranium, mixed with little lumps of albumen; on passing the scalpel over this layer, the instrument glides over it, and takes up nothing which seems to indicate the existence of a membrane over this layer. On detaching the arachnoid from the internal surface of the dura mater, it was found that the diaphanous membrane covering the purulent layer is but a continuation of it, that portion of the arachnoid which, under ordinary circumstances, lines the pia mater, and which is here separated from it by a layer of purulent matter; here, then, the pus is effused, not into the cavity of the serous membrane, but on its external surface, into the cellular tissue uniting it to the pia mater. On the brain, the arachnoid and pia mater were very much injected towards the fissure of Sylvius. On the right side there was found an albuminous concretion, similar to that which filled the vertebral canal. Concretions similar to the preceding were found under the tentorium cerebelli. The lateral and third ventricles were distended with a milky serum in great quantity. Thoracic and abdominal organs sound.

---

* The writer of this analysis met a case similar to the above; it occurred in Dublin about three years since. It was that of a man of very intemperate habits, whose liver was considerably enlarged; he had ascites and anasarca, and was treated in the usual way, without any amendment. One morning, when he awoke, he found the size of the abdomen very much diminished, and the swelling of the lower extremities quite gone:—He arose from bed at 12 o'clock in the day, sat a few hours at the fire, became drowsy, threw himself on the bed, and when his wife went to call him, at about 4 o'clock in the evening, she found him dead. The ventricles of the brain were found to be enormously distended with limpid serum.

*Remarks.* This case presents a combination of different symptoms, which are strikingly characteristic of acute inflammation of the spinal membranes. It was not, however, by these symptoms that the disease commenced; it perhaps, at first, was but a mere neurosis. M. Andral thinks that certain inflammations are preceded by mere nervous disturbance, in which, at first, all the disease consists, and that narcotics, administered at that moment, are very successful in dissipating all the symptoms; but allow the disease to proceed, and it will soon change its nature, and those functional disturbances, which at first depended on innervation, will be afterwards produced and kept up by inflammation, after which period narcotics would be mischievous. It was only on the fourth or fifth day that the nature and seat of the disease became manifest. The intelligence remained for a long time unaffected, whilst the power of sensation and motion was seriously interfered with. The pulse continued frequent; the dyspnœa, also, was constant and very sensible, which M. Andral thinks may be accounted for in this way, viz. that the primary seat of the disease lay in the spinal cord, in which he includes the medulla oblongata. A further reason for considering the affection purely nervous, is the moral cause which occasioned the menstrual suppression, and which was subsequently followed by the development of the severe symptoms.

## LESIONS OF THE DURA MATER.

Lesions of the dura mater are much more rare than of the other membranes of the brain.

In the first and second cases above cited, we have remarkable instances of tumors developed on the internal surface of the dura mater, one being situated in that portion of the membrane in contact with the vault of the cranium—the other in the tentorium cerebelli. The texture of these tumors resembled that of the dura mater itself. In the first of these cases, no satisfactory cause could be assigned for the disease; in the second, it seemed to be the consequence of external violence done to the occipital region, whereby the tentorium cerebelli became the seat of that osteo-fibrous growth already described.

*Lesions of the Arachnoid.* Lesions of this membrane, as of other serous membranes, refer principally to its products of secretion. M. Andral cautions us against admitting the arachnoid to be the seat of a morbid secretion, unless the product of this secretion be found in its own cavity. These morbid products, however, are more frequently found outside the arachnoid, in the cellulo-vascular tissue constituting the pia mater. The morbid products found in the cavity of the arachnoid are the following:

1. An effusion of clear and transparent serum. Such an effusion is very rare on the upper surface of the brain; it is much more common at the base.

2. An effusion of turbid milky serum, with purulent flocculi. M. Andral saw but one instance of this in the cavity of the arachnoid.

3. False membranes, not yet organized, lining one or other of the free surfaces of the arachnoid.

4. False membranes of longer standing than the preceding, of serous organization, extended over one of the free surfaces of the arachnoid.

5. Adhesions of a cellular appearance, analogous to the bands of the pleura, and extending from the one to the other of the free surfaces of the serous membrane.

In some cases, the only morbid appearance is a remarkable dryness of the arachnoid, on the surface not adhering.

Either with or without these latter morbid products of secretion, M. Andral states that he never detected, in the arachnoid membrane, the slightest vascular injection, change of colour, or thickening. Where, at first sight, the arachnoid did appear either coloured or thickened, he thinks that the seat of this lesion is in the subjacent cellular tissue. Whatever be the nature of the membrane lining the ventricles, it presents, in the pathological state, nearly the same lesions as the arachnoid investing the brain; but these lesions are more frequently found in the former. It is, for instance, much more common to find serum effused, in considerable quantity, into the ventricles, than into the great cavity of the arachnoid covering the convexity of the hemispheres. The presence of this effusion in the ventricles should never, according to M. Andral, be considered as the result of a morbid process, except the quantity of it exceeds one ounce in each lateral ventricle. There is seldom observed any notable difference in the quantity of serum contained in each ventricle.

Instead of limpid serum, there is sometimes found in the ventricles a turbid liquid similar to whey, in which float those albuminous flocculi, as they are called, which constitute so frequent an anatomical character of pleuritis or peritonitis. In some cases the ventricles have been found filled with pus, which, by reason, no doubt, of its great weight, was accumulated principally in the lower part of each lateral ventricle. In most of the cases where pus has been found within the ventricles, some has also been detected in certain points of the subarachnoid cellular tissue surrounding the nervous centres.

*Lesions of the Pia Mater.* These have been more frequently observed than lesions of the other membranes. Our author gives the following classification of them:

1. Infiltration of its tissue by clear, colourless, transparent serum.

2. Infiltration of its tissue by a turbid, milky liquid, and sometimes by real pus.

3. A state of scirrhous induration of the tissue of the pia mater.

4. Serous cysts, variable in size and number.

5. Cartilaginous or bony structures, which M. Andral saw, in one instance, cover, like a second vault, the anterior fourth of the convexity of one of the hemispheres of the brain.

6. Tubercles, sometimes few in number, and scattered over a large sur-

face, sometimes numerous and crowded together, forming by their union homogeneous whitish masses. It often happens that the tubercular matter is deposited between two convolutions, the space between which it perfectly fills up.

7. Adhesions, which are sometimes formed between the portions of the pia mater, which quit the arachnoid for the purpose of lining the interior of an anfractuosity, which then completely disappears, and several of the convolutions seem as if they were soldered together.

According to M. Andral, most of the lesions referred by medical writers to the arachnoid, and which are considered by them as the anatomical characters of arachnitis, are much more frequently seated in the pia mater. In almost all the cases, for instance, where the convexity of the cerebral hemispheres is covered with a layer of serum or pus, this layer has its seat beneath the arachnoid; by passing the back of the scalpel over the latter membrane, the morbid product is displaced, but not taken up. Every time that tubercular matter has been found by our author deposited around the nervous centres, or in their investing membranes, it was not the arachnoid that appeared to him to contain this morbid product, but the tissue of the pia mater. The same, he thinks, may be said of those cartilaginous or bony concretions occasionally found, in the form of grains, around the substance of the brain or spinal marrow. It is also in the pia mater that those small bodies are found, commonly known by the name of *glandulæ Pacchioni*, which, in some subjects, are very numerous towards the edge separating the upper from the inner surface of each cerebral hemisphere, the existence of which, however, is far from being constant. M. Andral considers those bodies, improperly called glands, to be a morbid product formed in the pia mater, and thinks that they have as little right to be deemed normal structures as those cellular bands in the pleuræ have, which some of the old anatomists looked on as physiological products in consequence of their frequent occurrence, and which they actually designated by the name of ligaments of the pleuræ.

Lesions of the pia mater may exist in different parts of this membrane. Their most frequent seat is on the convexity of the cerebral hemispheres. The pia mater investing the cerebellum, M. Andral has found to be less frequently changed in structure than that of the cerebrum.

With respect to the pia mater of the medulla spinalis, he finds, on consulting his own observations, as also those of other writers, that it is much less frequently the seat of morbid change than the pia mater surrounding the brain, properly so called, and also that, in most of the cases wherein the pia mater surrounding the cord has become the seat of purulent infiltration, this same infiltration is found in the encephalic pia mater. On the contrary, nothing is more common than to find the latter very much changed, whilst the other is perfectly healthy.

All possible changes of structure may exist in the membranes, without the substance of the brain itself at all participating in the change. Sometimes, however, the latter has been found changed at the same time as the membranes. Thus, in cases of inflammation affecting that portion of the membranes covering the convexity of the hemispheres, the grey substance of the convolutions has been found injected and softened. In some cases, in which the subarachnoid cellular tissue contained a great quantity of serum, M. Andral detected the existence of a species of œdema in the cerebral substance.

On slicing this substance, and pressing it between the fingers, a considerable quantity of a serous liquid was expressed from it, similar to that with which the pia mater was infiltrated.*

### DISTURBANCES OF THE FUNCTIONS.

These may be either of the functions of the organs of the life of relation, or of those of the life of nutrition. The former serve in a particular manner to characterize the disease; the latter, though not so characteristic, may also help in forming the diagnosis.

### DISTURBANCES OF THE FUNCTIONS OF THE LIFE OF RELATION.

*Lesions of Sensibility.* These may have as their seat, either the meninges themselves, or the different parts which receive their nerves from the cerebrospinal axis.

Like all fibro-serous membranes, the membranes of the brain indicate most of the changes produced in them by a greater or less exaltion of their sensibility, whence results headache, one of the most important symptoms to be considered in the history of meningitis.

Our author now proceeds to consider the degree of frequency of this symptom in diseases of the membranes.

Out of twenty-eight cases of affections of the cerebral membranes detailed by him, sixteen complained of headache, and in the remaining twelve no such symptom was observed.

In the sixteen where the pain of head had existed, the alterations discovered on opening the bodies were the following:

In two of them (Cas. 1 and 2) tumors were found attached to the dura mater, which had compressed the nervous substance in contact with them.

In two others (Cas. 3, 4) there were no effusion of blood into the cavity of the arachnoid.

In two subjects (Cas. 20, 23) no other change was found than a considerable effusion of limpid serum into the ventricles of the brain.

Three other subjects (Cas. 6, 7, 9) presented merely a bright redness of the meninges. Another (Cas. 8) presented pseudo-membranous concretions on the interior of the great cavity of the arachnoid.

In five cases (Cas. 11, 17, 24, 26, 28) he found the pia mater, either of the convexity, or of the base, infiltrated with pus. In one of these (Cas. 26) there likewise existed cellular adhesions intimately connecting the two folds of the arachnoid covering the convexity of the cerebral hemispheres. This person had been all his life tormented with headaches.

In one case only (Cas. 18) the ventricles were found filled with a purulent fluid.

From these facts M. Andral concludes that the pain accompanying affections of the meninges may exist with diseases of these membranes, differing from each other both as to their nature and seat.

---

* This *cerebral œdema* was the only alteration discovered by M. Andral, on examining the body of an individual who, about fifty hours before his death, had fallen down suddenly, deprived of sense and motion. He died with all the symptoms characterizing a violent attack of apoplexy. That was an instance of what may be called serous apoplexy.

He next considers what were the lesions found in the meninges of the twelve, who complained not of headache (two of these cases he leaves out of the account for very just reasons).

In two of them (Cas. 10, 16) the pia mater was infiltrated with pus, either that portion of it covering the convexity (Cas. 10), or that covering the base (Cas. 16).

A sero-purulent liquid filled the ventricles in one subject (Cas. 19).

Simple serum, either effused into the tissue of the pia mater, or contained in cysts, was found on the convexity of the brain in three subjects (Cas. 13, 14, 15).

Without dwelling longer on this detail we see plainly that it follows from these facts that affections of the membranes, during which no pain of head was complained of, differed neither in their nature nor seat from those in which headache was a prominent symptom.

Out of sixty-two cases of acute inflammation of the meninges exempt from all other complication detailed in M. M. Parent du Chatelet and Martinet's Work on Arachnitis, there were fifty in which headache was a leading and prominent symptom.

Out of fourteen cases of meningitis described by Dance twelve complained of headache.

In the numerous cases of acute hydrocephalus published by Doctor Charpentier of Valenciennes, pain of head was a prevailing symptom.

Hence it follows that in the great majority of cases headache may be considered as one of the symptoms of acute or chronic affections of the meninges, and that it may accompany very different morbid lesions of these membranes.

M. Andral now asks whether this pain of head can by its presence serve to distinguish inflammation of the meninges from other diseases, which, though having their origin out of the brain, may however give rise to several of the symptoms characterizing acute meningitis? Such for instance as acute inflammations of the intestinal canal.

He states that of forty-five cases of inflammation of the digestive tube detailed in one of the preceding volumes of the present work, twenty-one had decided headache—of the remaining twenty-four there were several the precise history of whose state was not accurately ascertained.

From his own observations, as well as from numerous cases of entero-mesenteric and typhoid fevers detailed in the writings of Dance, Petit and Serres, Bouillaud and Louis (in all which the only morbid lesion detected after death was in the intestinal canal), M. Andral infers that headache is a symptom met with in other cases besides those wherein the nervous centres are primitively and idiopathically affected; and consequently that it cannot be laid down, as a proof of the existence of an affection of the cerebral membranes. Being observed at the outset of many febrile affections, it indicates no doubt a disturbance of the innervation; but it no more proves the presence of real meningitis, than those painful affections of the limbs do, so common in such cases. M. A. conceives that it is to such pains, which are altogether nervous, and not at all connected with any inflammatory state of the organ in whose vicinity they are felt, we should attribute many of those epigastralgies so frequent at the commencement of fevers, and which he very properly thinks are too often and too lightly referred to a gastritis.

From several cases detailed in his own work, and very many described by other writers, M. Andral feels himself warranted in concluding that, though in many cases the seat of the lesion of the membranes is pointed out by that of the headache, it is however far from being always so.

With respect to the seat of the headache in continued fevers, he has found the pain in the very great majority of cases to be frontal, or suborbital; in some it is felt either at the temples, sinciput, or occiput; and in some cases the patient cannot point out its precise seat.

Thus, whilst there are some points of resemblance with respect to the seat of the headache in meningitis, and that in continued fevers, the pain is not in the latter so strictly confined to certain points of the head.

The intensity of the pain of head merits particular attention, when we wish to convert this symptom into a sign. The headache of continued fevers is scarcely ever made known to the physician unless he questions the patient particularly on the subject. On the contrary, in most cases of meningitis, the pain of head is the first and predominant symptom of which the patient complains.

Headache is almost the only modification of sensibility observed in the ordinary cases of meningitis. In some few cases, however, the sensibility of the skin has been found modified. This, however, M. Andral conceives to depend less on any specific morbid lesion, than on some peculiar disposition of the individual.

On comparing, with respect to their nature and frequency, the lesions of general sensibility, observed in cases of acute meningitis, with those seen in typhoid fevers, he concludes that these lesions are so similar in both, as to assist very little in the way of diagnosis.

Our author next considers how far and in what manner the organs of the senses are disturbed in meningitis, particularly the organs of sight and hearing. The modifications of the organ of sight were for a long time considered by pathologists as capable of serving to characterize certain acute or chronic affections of the brain.

These modifications may be classed under the three following heads:

1st. Modifications of the motions of the globe of the eye.

2d. Modifications in the state of the pupil.

3d. Modifications of vision itself.

The motions of the eye may be altered in several ways: sometimes they are irregular, and as it were convulsive: sometimes the globe is immoveable: sometimes there is strabismus, either of one side, or of both. These different alterations cannot be referred to any specific lesion. They have been observed in adynamic and ataxic fevers without any appreciable lesion of the nervous centres. Strabismus, however, when permanent, our author considers to possess more value as a sign of meningitis, than either irregularity of motion, or immobility of the eyes.

The state of the pupil is far from being always the same in the different cases of meningitis. Several physicians consider that this opening, contracted and moveable in the first stage of the disease, becomes dilated and immoveable, as soon as serous or purulent effusion has taken place, either around the brain, or into the ventricles. This rule M. Andral considers to be any thing but correct; in as much as with lesions precisely similar, the pupils may present the most different appearance, and what is more, with lesions altogether dissimilar, these openings may present precisely the same appearance.

From a number of cases cited by our author, in some of which the pupils were contracted, in some dilated, in some a natural state of the pupil, and in others alternate contraction and dilatation, he concludes that it would be vain to attempt to connect such or such a state of the pupil with any specific morbid alteration of the membranes.

Vision itself is oftentimes disturbed in affections of the cerebral membranes. Sometimes it is lost altogether; sometimes it is perverted in some cases diplopia has been observed; some persons cannot bear the rays of light on the retina. None of these alterations however can be said to belong peculiarly to meningitis.

The faculty of hearing has been, though rarely, affected in meningitis. M. Andral cites one case in which complete deafness was observed, in which the entire lesion discovered after death was seated on the upper surface of one of the lobes of the cerebellum, and consequently at a great distance from the origin of the auditory nerves. Deafness has been observed in cases of typhoid fever, where no morbid lesion whatever was discovered in any part of the brain to account for it.

An attentive consideration of the different alterations of sensibility presented by individuals labouring under meningitis, has convinced our author that none of these alterations are constant, none of them necessarily connected with such or such a form of meningitis, and that the disturbance of function is much less dependent on the membrane so affected, than on the brain itself. It is this organ which produces these disturbances, and consequently they must vary in the individual cases, according as the brain participates in, and sympathizes with, the irritation of its membranes. In this way also may be explained the infinite variability of the symptoms of pericarditis; for in this case too the determining cause of the symptoms is not in the pericardium, but in the heart itself. What we see on the dead body cannot always inform us what took place during life, and pathological anatomy will not certainly tell us all that is to be known with respect either to the nature, seat, or treatment of disease.

*Lesions of Motion.* These are met with more frequently in affections of the cerebral membranes, than lesions of sensation, but they are not more constant than the latter, and they are sometimes wanting in cases, where after death we find the same morbid changes of structure, as in the cases where they have existed.

Lesions of motion, observed in affections of the meninges, may be divided into two great classes; in the one, the motions continue, but they are performed in a disorderly way; in the other the motions no longer exist. The first class comprises the different spasms, which are sometimes clonic, sometimes tonic.

Under clonic spasms may be ranged those disturbances of motion, which have been observed in the different cases published regarding the diseases of the membranes.

Some persons present merely a sort of general agitation; they are constantly in motion, and rest appears to them insupportable; they are anxious incessantly to change their position.

In others this agitation is confined to some particular part of the body; some patients constantly move their arms or legs; in some the trunk is alternately raised and depressed; some constantly move the head from right to left, and from left to right. In these cases it is the will, though irregular, that produces the motion; there are cases, however, where the motions are involuntary; thus in some patients the muscles which terminate at the flexor tendons of the fingers, are agitated by violent contractions; hence subsultus tendinum; several present, as a prominent symptom, a tremor which is sometimes general, and sometimes partial.

Convulsions, properly so called, are among the most common phenomena accompanying acute meningitis. These are sometimes, though very rarely, general. When partial, they are sometimes confined to the same part, at other times they affect different parts of the body successively. The parts most usually affected with convulsive motions in meningitis are, the globes of the eyes, the eye-lids, the face, the lips, and finally the extremities.

Tonic spasms, as they are called, are not less frequent than clonic, in the disease now under consideration. Thus permanent flexion of the fore-arm on the arm is often observed. Reversion of the head back, its inclination to the right or left, are sometimes observed in cases of meningitis, as also tetanic rigidity of the neck, trunk, or extremities, trismus, &c.

Under the second class, in which motion is either diminished, or altogether destroyed, may be reckoned those numerous varieties of paralysis observed in meningitis. This paralysis may take place in the muscles of the eye, of the eye-lids, face, lips, or limbs: either one, or several of these, may be deprived of motion. In these different parts the paralysis may be established either slowly, or as instantaneously as the loss of motion succeeding cerebral hæmorrhage.

After considering in a purely nosological way the different lesions of motion in individuals attacked with meningitis, our author next proceeds to establish some relation between these functional lesions, and the different species of morbid changes found in the meninges after death. For this purpose he passes in review each of the disturbances of loco-motive action above-mentioned, first mentioning those cases only, where such disturbance existed singly at the last period of life.

With respect to *general agitation*, his own experience will not warrant him in saying any thing, as he never met that symptom existing singly in any case. In cases mentioned by others where this was a prominent symptom, the meninges covering the convexity of the brain were found injected and thickened. With respect to *partial agitation*, *subsultus tendinum*, and *trembling of the limbs*, his own observation will not enable him to say more, as he has not met these lesions existing singly. Having adverted to the other lesions of motion observed in affections of the cerebral membranes, he next considers the important phenomenon of *paralysis*. In the fifteen cases of hemiplegia observed by him, and to which he had previously alluded, he states that in four cases only (Case 1, 2, 4, 13) the brain was compressed by accidental productions developed in the meninges, which compression occurred, in every case, on the side opposite to that of the hemiplegia, and tended directly from above downwards. In five of these cases the compression existed on one of the cerebral hemispheres. In one only (Case 2) a tumor developed in the dura mater had compressed, and wasted one of the lobes of the cerebellum. In this last case also the paralysis was at the opposite side from the seat of the tumor, and nothing else was observed but simple hemiplegia, without any other modification of motion. However, before the hemiphlegia was established, convulsive motions had existed in the arm of the side opposite to that of the lesion of the cerebellum: at a later period this limb lost altogether the power of moving, and ultimately the paralysis extended to the lower extremity of the same side.

In the subject of the fourth case the limbs of the right side became paralysed gradually; the fore-arm remained for a considerable time flexed on the arm. Blood was found effused on the left side between the arachnoid and dura mater.

Instead of hemiplegia some cases presented paralysis of a single limb. Thus in the fifteenth case detailed by our author, wherein the pia mater, traversed by tubercular granulations, was infiltrated with serum towards the convexity of the brain, the right arm, as also the right side of the face, were the only parts affected with paralysis.

He next proceeds to the consideration of those cases in which, instead of its being confined to some particular part, the loss of motion is general, and strikes both sides of the body either successively, or simultaneously. In all such cases, when the paralysis of both sides supervened before the last struggle, our author uniformly found in both sides of the brain lesions corresponding with this symptom.

The different facts which have been now analysed with the view of discovering, what are the lesions, which, in cases of meningitis, coincide with the different alterations in the power of motion, lead M. Andral to this consequence; that, with similar lesions of structure in the dead body, the most varied disturbances in the function of motion are found to coincide; let there be convulsion or paralysis, in the greater number of cases the structural lesion after death will be the same. Thus beyond that lesion, which the scalpel points out as having its seat in the membranes of the brain, there is in the brain itself a modification not recognizable by the anatomist, which is produced no doubt by the lesion of the membrane, but which, variable in each individual, is the real cause of all the functional disturbances observed.

The different disturbances in the function of motion, now passed in review, may take place also in several other cases, where, the membranes being uninjured, the cerebral substance itself is altered. They also are observed in severe fevers, the seat of which we are so often induced by the symptoms to place in the brain. In fevers, as well as in acute meningitis, we often observe subsultus tendinum, convulsive motions, trismus, paralysis of different parts. But in the great majority of cases these phenomena are less frequent, less intense, and less durable. Their existence however proves that this same modification produced in the brain by the irritation of the membranes, may also be produced in it under the influence of other causes, and that, without there being found after death any appreciable alteration either in its substance, or in its investing membranes.

*Lesions of Intellect.* The intellectual faculties being found by M. Andral considerably interfered with in the great majority of the cases detailed in the present volume, he very naturally considers lesion of intellect a much more constant phenomenon in acute meningitis, than that either of sensation or motion. This alteration of intellect may present itself under two different forms in the meningitis, either under the form of delirium, or of coma.

Delirium may be either violent and noisy, accompanied with a development of great muscular strength; or the patient may remain quite silent and still, exhibiting very great prostration of strength. Sometimes one single idea engages the patient; sometimes ideas of the most heterogeneous kind occupy his mind.

In some this disturbance of intellect attains its highest degree from the very commencement; in others it comes on gradually and insensibly. On reviewing the numerous varieties of delirium in the several cases described, M. Andral concludes that no single one of these various forms characterizes meningitis, that there is not one of them which may not be found in the different cerebral irritations which are purely sympathetic and unaccompanied with any structural alteration of the membranes appreciable on the dead body.

When once the delirium has shown itself it may not cease, presenting merely alterations of exacerbation and remission; it may also be only transitory. In some patients the delirium first lasts for a very short time; then at the end of a period more or less long it returns; the intermissions become more and more short, and at last the affection becomes continued. In some it appears only at night, and the clearness of the intellect during the day seems to exclude the idea of a meningitis altogether. In some a delirium of several days' duration suddenly disappears a little time before death, when the other symptoms become more aggravated.

Wherefore when endeavouring to distinguish the delirium of meningitis from delirium produced by sympathetic irritation of the brain, we would be wrong in laying it down that the latter only can be intermittent, as several cases prove, that the delirium arising from meningitis may be accompanied with perfectly lucid intervals.

The period of the disease when the delirium appears is far from being the same in every case. It hardly ever marks the very outset of the affection; so that when in the midst of perfect health delirium does appear, it is not at all probable, that it is the result of meningitis. In general, head-ache precedes it.

Out of forty cases of acute meningitis collected by M. Andral, in which he was perfectly certain both of the precise period when the disease commenced, and also of the moment when the disturbance of the intellect appeared, he found that the delirium developed itself.

| | |
|---|---|
| On the 1st day | in 3 cases. |
| 2d | 1 |
| 3d | 3 |
| 4th | 3 |
| 5th | 3 |
| 6th | 3 |
| 7th | 4 |
| 8th | 6 |
| 9th | 2 |
| On the 10th day | 0 |
| 11th | 0 |
| 12th | 1 |
| 13th | 4 |
| 14th | 1 |
| 15th | 2 |
| 16th | 1 |
| 20th | 2 |
| 24th | 1 |

Since with very few exceptions the delirium has manifested itself as a constant phenomenon in acute meningitis, our author fairly concludes that it may be produced in this disease, whatever may be the nature of the lesion of which the meninges are the seat. It is certainly curious to see how a simple sanguineous congestion of the pia mater, in those cases even wherein it is partial, or a litttle pus infiltrating its tissue, can produce the most serious disturbance of the intellect, whilst a more deep-seated alteration of the brain, an immense softening for instance, oftentimes will exist without producing the slightest disturbance of mind. Is it, as some have said, because the irritation of the membranes, re-acts principally on the most superficial part of the brain, and it is here particularly the intellect has its seat?

Instead of delirium, individuals labouring under meningitis may present a state of coma, which sometimes exists from the very commencement of the disease, and sometimes supervenes on delirium. The latter is much more frequent, at least in adults.

When a patient dies in the midst of a state of coma, the lesions found in the membranes differ neither in their nature, nor seat from those found in cases where life is terminated in the midst of a state of delirium. Hence those authors are wrong, who say that delirium appertains exclusively to meningitis of the convexity of the brain, whilst coma is peculiar to that of the base. M. Andral thinks, that inflammation of the meninges, whatever be its seat, may at first determine in the brain a period of excitement, indicated by delirium, and then a period of collapse, either real or apparent, evinced by coma. These two stages exist in the great majority of cases which terminate in death. In some individuals, however, the stage of excitement is unusually prolonged, and they die before the coma has supervened; whilst in others, on the contrary, the phenomena of excitement are very transient, and the state of coma comes on without having been preceded by delirium properly so called. There are, in fine, some cases where coma is the first symptom: persons who a little before were in a perfect state of health, fall down suddenly deprived of sense and motion. Cases 21 and 22 of our author exemplify this apoplectic form of the disease. In these two cases nothing else was found, but an enormous distention of the ventricles by limpid serum; and in all such cases the ventricles have been uniformly the seat of the effusion. A case similar to the above is recorded by another physician; it was that of an old man, 76 years of age, labouring under organic disease of the heart. The dropsy symptomatic of this affection had gradually disappeared, and the patient appeared to be doing very well However he got up one morning to go to the water closet—returned quickly to his room with his face quite flushed, endeavoured to make towards his bed, when he fell down suddenly and expired without uttering a word.

In proportion to the greater or less rapidity with which the serous effusion takes place, very different forms of disease are observed. If a very large effusion take place from the arachnoid in a very short space of time, the result is a morbid state similar to what is produced by a very abundant cerebral hemorrhage, or in other words, apoplexy. This is serous apoplexy, an affection which the moderns have very improperly erased from nosological systems. If the serum accumulates somewhat less rapidly, either in the external pia mater, or in the ventricles, the symptoms are there observed to be such as accompany every irritation of the meninges, (see Case 20).

If the accumulation of serum takes place slowly, there may result a third form of which an instance is presented in Case 22. Here the power of motion remains unimpaired, whilst the intelligence is weakened by degrees.

To conclude; in those cases where the disturbance of intelligence depends on an affection of the meninges, the cause of such disturbance can no more be referred to any specific alteration than that of motion or sensation can, and the diversity of the lesions of intelligence, as well as of those of motion and sensation, can only be accounted for by referring it to the different susceptibility of the brain to impressions.

## DISTURBANCES IN THE FUNCTIONS OF THE ORGANS OF NUTRITIVE LIFE.

Several of these disturbances are very important to be considered, when we would establish a diagnosis of meningitis, and distinguish it from other diseases, in which nearly the same functional disturbances of the brain are found. With respect to the digestive tube, for instance, there appears in several individuals, labouring under acute meningitis, very remarkable morbid phenomena, which supervene but very rarely in cases wherein the intestine is the seat of inflammation more or less intense. The circulation is equally disturbed in certain cases in so special a manner, that by combining the signs furnished by it then, with the signs given by disturbance of the cerebral functions, we may attain with certainty the diagnosis of a meningitis.

In a great number of persons attacked with meningitis, the digestive tube does not present, during life, any appreciable functional lesion, whilst, in others, it is the seat of disturbances more or less serious: in this latter case, it would be desirable to ascertain whether these disturbances are merely the result of an anormal influence, exercised by the nervous centres on the digestive canal, or whether they are dependent on an affection of this tube itself, an affection which has been superadded to the disease of the encephalic membranes.

Whenever the meningitis was not complicated with any other affection, M. Andral almost uniformly found the tongue to preserve its natural state; it is broad, moist, free from redness, and sometimes even paler than usual; most frequently it is covered with a light whitish coat. From a review of several cases, observed both by himself and others, our author makes this assertion, viz. that as often as in an individual, who died of meningitis, there was not found on dissection any morbid state, either of the digestive tube or urinary passages, the tongue never even once deviated from its natural state; it even preserved this state in several cases, where the lesions found in the stomach were of the class of those which most frequently produce no modification in the state of the tongue; and, in fine, it almost uniformly lost its physiological appearance only in cases wherein dissection pointed out lesions, which we know usually coincide with a more or less obvious modification of the state of the tongue.

As often, then, as in a patient, who presents several of the signs of encephalic irritation, the tongue is found red, dry, brown, &c. we shall be disposed to consider, either that this irritation is but sympathetic of another affection, or else that the latter is complicated with it. (There are however, some exceptions to this rule; for in several of the cases detailed in the third volume of this work, wherein the predominant symptoms are those of *ataxic* fever, the natural appearance of the tongue might have induced one to infer the existence of meningitis; and yet there was no such affection, the entire lesion, as far at least as dissection could ascertain, being seated in the intestine.) Thus, among the numerous causes which may modify the state of the tongue, we must not rank meningeal inflammation.

In most of the cases of meningitis, where it was not complicated with any other affection, M. Andral has not found thirst to be a very prominent symptom. Loss of appetite often shews itself at the commencement of the disease; yet a desire of food is observed in some cases, after the intense headache which marks the invasion of the affection has already existed for several days.

In some, the epigastrium is the seat of pain, which is increased by pressure; yet M. A. has never, in any such cases, found a complication of gastritis. This epigastralgy shews itself near the commencement of the attack, and never becomes very intense.

Nausea and vomiting very frequently accompany acute meningeal inflammation; they almost always shew themselves at the commencement of the attack; sometimes they are so slight as to attract but little attention. (In Dr. Bright's Medical Reports, we see some cases in which vomiting was a very prominent symptom.) In those cases where nausea and vomiting have been observed, it frequently happens that we find no other symptom indicative of gastric disturbance; the epigastrium is free from pain, abdomen soft, and, when the case has terminated fatally, dissection can detect no gastric structural lesion, even though the vomiting had been very severe and obstinate. A striking instance of a modification of function, not accounted for by any change in the structure of the organ.

The part of the meninges inflamed has no influence whatever on the production of the nausea and vomiting.

Vomiting, when it presents the characters now described, when, for instance, a natural state of the tongue coincides with it, is a valuable sign to distinguish, at the outset, the nervous symptoms depending on idiopathic irritation of the encephalon from those which are connected with inflammation of the intestinal follicles.

*Lesions of the Circulation.* The disturbances produced by diseases of the membranes in the circulatory apparatus may regard, 1st, the motions of the heart—2dly, the manner in which the arterial expansions are performed—3dly, the capillary circulation—4thly, the qualities of the blood.

From a large number of cases of meningitis observed by M. Andral, in which he carefully noted the state of the pulse, with respect to frequency, he feels himself justified in concluding, that nothing is more variable than this symptom in individuals so affected. In some cases, he found the pulse accelerated—in some it was natural, and in others slower than ordinary. The latter variation, however, is of rarer occurrence than the others, in the cases observed by him, who, by the way, were all adults.

He observes, also, that the proportion of cases in which the pulse remains natural, or becomes slower than ordinary, is more considerable in acute meningeal inflammations than in those of the thoracic or abdominal viscera.

M. Andral makes here a remark of considerable practical importance, viz. that the slowness of the pulse becomes occasionally a sign of very great value, in distinguishing a real inflammation of the meninges from other morbid states which may resemble it; he here refers to some cases in which, the meninges becoming attacked during the course of some other affection, the commencement of this complication was marked by a striking change in the pulse, which having, up to that moment, been very much accelerated, suddenly lost its frequency. From the analysis of several cases, our author asserts that the absence of frequency in the pulse, no more than its slowness, depends neither on the seat nor nature of the meningeal inflammation: yet his general opinion inclines him to think that this state of the circulation occurs more frequently when the ventricles are distended with a great quantity of liquid; the same phenomenon has been noticed where the ventricles were quite sound. With respect to acceleration of the pulse, this, he thinks, more particularly occurs in the cases, wherein the membranes covering the convexity of the brain are the seat of inflammation. With respect to the strength of the pulse in meningitis, it presents no constant character—in some cases it is hard, full, and vibrating, whilst in others it is small and concentrated from the commencement of the affection. It generally becomes weaker and more compressible during the period of coma. Irregularity in the rythm of the pulse has been observed in some meningeal inflammations; but pathological anatomy is as unable to account for such a phenomenon as for its strength or weakness, frequency or slowness. The capillary circulation undergoes certain modifications in persons labouring under meningitis. These are recognizable principally in the conjunctiva and face; the commencement of the disease is frequently accompanied by great redness of both these parts; this state is sometimes succeeded by great paleness; sometimes this paleness exists from the commencement of the attack, and it continues to the very last moment of life, and this is observed not only in those cases where a copious effusion of serum is found after death, but also in cases where dissection detected proofs of very active inflammation in the membranes of the brain, such as infiltration of the pia mater with pus, flocculent serum in the ventricles, false membranes at the base of the brain. The temperature of the skin varies much in meningeal affections.

*Lesions of the Respiration.* This function does not always remain in its natural state, in individuals labouring under meningeal inflammation. The disturbances which it undergoes seem to depend on the influence exercised on it by the affection of the nervous centres, since, on dissection, no lesion is found in the lungs, sufficient to account for the change in the respiration. However, the cases in which the respiration remains unchanged in meningitis, are more numerous than those in which it undergoes modification. In those cases wherein the respiration has been modified, the anatomical lesions were completely insufficient to account for the variable influence which the irritated or compressed brain possesses over the respiratory apparatus. In a preceding volume of this work, cases are detailed in which the different modifications of respiration have been observed during life, without there being any appreciable lesion, either of the brain or its membranes;

any cause tending to disturb the innervation, either temporarily or permanently, is sufficient to produce this effect.

From the great length to which we find our notice of this interesting volume has extended, we find it necessary to reserve our analysis of the remaining portion for another number of the Journal. With respect to the merits of the book, it is almost unnecessary to say any thing in the way of eulogy or criticism. A work founded on inquiries so difficult, and conducted with such unwearied research, requires not the praise of the journalist to recommend it to the profession.

## THE PHILOSOPHY OF HEALTH; OR AN EXPOSITION OF THE PHYSICAL AND MENTAL CONSTITUTION OF MAN, WITH A VIEW TO THE PROMOTION OF HUMAN LONGEVITY AND HAPPINESS. By *Southwood Smith*, M.D. Vol. I. pp. 408. 1835.

THIS is really a very clever work, and much do we regret that only the first volume is published: for we suspect that the second volume, treating on *mind*, will be still more interesting than this, whose object is *matter*. This work will be popular in one sense—but not in the ordinary sense. It will be much read, and much relished, by the comparatively few who read and *think*—but not by the multitude who read without reflection. Although there is not, perhaps, much in the volume which might claim the character of being perfectly new or original, yet the subjects are very often expressed in such an able and agreeable manner, that they strike us with an air of novelty, and seldom fail to rivet our attention. The second chapter, for example, in which the two lives, the animal and organic, are described and compared, may be read with great advantage by the medical student—aye, and the practitioner, too—as conveying the knowledge of a very curious and important subject in luminous language, and comprehensible by the meanest capacity. Not one-half of our medical brethren have a clear conception of the separate existence, yet intimate connexion, of the organic and animal lives—and a still smaller proportion have any idea of the part which this distinction and intimacy play in the animal economy, both in health and in disease. To them, therefore, we recommend a perusal of Dr. Smith's book—especially the second, third, and fourth chapters. The following extract from the second chapter, exhibiting a sketch of man's declension from the meridian of his mental and physical zenith, down to the setting of his sun in the ocean of oblivion, will convey a good idea of Dr. Smith's manner of handling his subjects.

"In man, the process of death is seldom altogether natural. It is generally rendered premature by the operation of circumstances which destroy life otherwise than by that progressive and slow decay which is the inevitable result of the action of organized structure. Death, when natural is the last event of an extended series, of which the first that is appreciable is a change in the animal life and in the noblest portion of that life. The higher faculties fail in the reverse order of their development; the retrogression is the inverse of the progression, and the noblest creature, in returning to the state of non-existence, retraces step by step each successive stage by which it reached the summit of life.

In the advancing series, the animal is superadded to the organic life; sensation, the lowest faculty of the animal life, precedes ratiocination, the highest. The senses called into play at the moment of birth soon acquire the utmost perfection of which they are capable; but the intellectual faculties, later developed, are still later perfected, and the highest the latest.

In the descending series, the animal life fails before the organic, and its nobler powers decay sooner and more rapidly than the subordinate. First of all, the impressions which the organs of sense convey to the brain become less numerous and distinct, and consequently the material on which the mind operates is less abundant and perfect; but at the same time, the power of working vigorously with the material it possesses more than proportionally diminishes. Memory fails; analogous phenomena are less readily and less completely recalled by the presence of those which should suggest the entire train; the connecting links are dimly seen or wholly lost; the train itself is less vivid and less coherent; train succeeds train with preternatural slowness, and the consequence of these growing imperfections is that, at last, induction becomes unsound just as it was in early youth; and for the same reason, namely, because there is not in the mental view an adequate range of individual phenomena; the only difference being that the range comprehended in the view of the old man is too narrow, because that which he had learnt he has forgotten; while in the youth it is too narrow, because that which it is necessary to learn has not been acquired.

And with the diminution of intellectual power the senses continue progressively to fail: the eye grows more dim, the ear more dull, the sense of smell less delicate, the sense of touch less acute, while the sense of taste, immediately subservient to the organic function of nutrition, is the last to diminish in intensity and correctness, and wholly fails but with the extinction of the life it serves.

But the senses are not the only servants of the brain; the voluntary muscles are so equally; but these ministers to the master-power, no longer kept in active service, the former no longer employed to convey new, varied, and vivid impressions, the latter no longer employed to execute the commands of new, varied, and intense desires, become successively feebler, slower, and more uncertain in their action. The hand trembles, the step totters, and every movement is tardy and unsteady. And thus, by the loss of one intellectual faculty after another, by the obliteration of sense after sense, by the progressive failure of the power of voluntary motion; in a word, by the declining energy and the ultimate extinction of the animal life, man, from the state of maturity, passes a second time through the stage of childhood back to that of infancy; lapses even into the condition of the embryo: what the fœtus was, the man of extreme old age is; when he began to exist, he possessed only organic life; and before he is ripe for the tomb, he returns to the condition of the plant.

And even this merely organic existence cannot be long maintained. Slow may be the waste of the organic organs; but they do waste, and that waste is not repaired, and consequently their functions languish, and no amount of stimulus is capable of invigorating their failing action. The arteries are rigid and cannot nourish; the veins are relaxed and cannot carry on the mass of blood that oppresses them; the lungs, partly choked up by the deposition of adventitious matter, and partly incapable of expanding and collapsing by reason of the feeble action of respiratory apparatus, imperfectly aërate the small quantity of blood that flows through them; the heart, deprived of its wonted nutriment and stimulus, is unable to contract with the energy requisite to propel the vital current; the various organs, no longer supplied with the quantity and quality of material necessary for carrying on their respective processes, cease to act; the machinery stops, and this is death.

And now, the processes of life at an end, the body falls within the dominion of the powers which preside universally over matter; the tie that linked all its parts together, holding them in union and keeping them in action, in direct opposition to those powers dissolved, it feels and obeys the new attractions to which it has become subject; particle after particle that stood in beautiful order fall from their place; the wonderful structures they composed melt away; the very substances of which those structures were built up are resolved into their primitive elements; these elements, set at liberty, enter into new combinations, and become constituent parts of new beings; those new beings in their turn perish; from their death springs life, and so the changes go on in an everlasting circle." 72.

The third chapter, however, is our favourite. In this, our author examines the ultimate object of organization and life—and with an amiable, but, we fear, an enthusiastic *optimism*, comes to the conclusion that this ultimate object is—PLEASURE.

"Two functions, sensation and voluntary motion, are combined in the animal life. Of these two functions, the latter is subservient to the former: voluntary motion is the servant of sensation, and exists only to obey its commands.

Is sensation, then, the ultimate object of organization? Simple sensation cannot be an ultimate object, because it is invariably attended with an ultimate result; for sensation is either pleasurable or painful. Every sensation terminates in a pleasure or a pain. Pleasure or pain, the last event in the series, must then be the final end.

Is the production of pain the ultimate object of organization? That cannot be, for the production of pain is the indirect, not the direct—the extraordinary, not the ordinary, result of the actions of life. It follows, that pleasure must be the ultimate object, for there is no other of which it is possible to conceive. The end of organic existence is animal existence; the end of animal existence is sentient existence; the end of sentient existence is pleasurable existence; the end of life, therefore, is enjoyment. Life commences with the organic processes; to the organic are superadded the animal; the animal processes terminate in sensation; sensation ends in enjoyment; it follows, that enjoyment is the final end. For this every organ is constructed; to this every action of every organ is subservient; in this every action ultimately terminates.

And without a single exception in the entire range of the sentient creation, the higher the organized structure the greater the enjoyment, mediately or immediately, to which it is subservient. From its most simple to its most complex state, every successive addition to structure, by which function is rendered more elevated and perfect, proportionally increases the exquisiteness of the pleasure to which the function ministers, and in which it terminates.

Pleasure is the result of the action of living organs, whether organic or animal; pleasure is the direct, the ordinary, and the gratuitous result of the action of both sets of organs; the pleasure resulting from the action of the organs is conducive to their complete developement, and thereby to the increase of their capacity for affording enjoyment; the pleasure resulting from the action of the organs, and conducive to their developement, is equally conducive to the perpetuation of their action, and consequently to the maintenance of life; it follows, not only that enjoyment is the end of life, but that it is the means by which life is prolonged." 75.

Our author happily illustrates the connexion of the animal with the organic life, through the medium of the great sympathetic, and shews that, although the organs supplied by the ganglionic nerves, perform their functions without our knowledge, and without our consent; yet their healthy action communicates a pleasurable sensation to the whole of the animal life—and why? "Because the sentient mingle with organic nerves—because the sentient nerves are impressed by the actions of the organic organs. And how impressed? As long as the actions of the organic organs are sound, that is, as long as their processes are duly performed, the impression communicated to the sentient nerves is, in its nature, agreeable;—is, in fact, the PLEASURABLE CONSCIOUSNESS WHICH CONSTITUTES HEALTH."—81.

As, in this volume, Dr. S. does not enter at all into the converse of the picture—into the sufferings produced by the morbid workings of the ganglionic viscera, all appears in rosy tints, and the life of man is portrayed as an almost uninterrupted series of pleasurable sensations. Such would probably be the case, were we in a state of Nature—or at least in that state which the beneficient Author of our Being designed for us. But whether, in consequence of the original fall of man from a state of innocence, or from the vitiated condition of society in which he delights, but so it is, that the pains and penalties, from moral ills and physical maladies, make a sad drawback from the pleasures of life as drawn by our able author. Pleasure, he observes, is the "ordinary result of the action of the organs. Pain is sometimes the result, but it is the extraordinary, not the ordinary result." Abstracting, therefore, from the aggregate amount of pleasure, the aggregate amount of pain, "the balance in favour of pleasure is immense." 99. In respect to the amount of this balance, we own ourselves to be somewhat sceptical, and rather at variance with Dr. Smith. We hope and trust that the author's personal experience (for much of these calculations, after all, must be drawn from individual feelings) has prompted him to draw this flattering picture of human life. Happiness, he thinks, may exist without longevity—"but there cannot be longevity without happiness." There is, doubtless, much truth in this statement, unless an individual enjoy a tolerably good state of health, both mental and corporeal, long life is improbable.

> "An advanced term of life and decrepitude are commonly conceived to be synonymous: the extension of life is vulgarly supposed to be the protraction of the period of infirmity and suffering, that period which is characterized by a progressive diminution of the power of sensation, and a consequent and proportionate loss of the power of enjoyment, the 'sans teeth, sans eyes, sans taste, sans every thing.' But this is so far from being true, that it is not within the compass of human powers to protract in any sensible degree the period of old age properly so called, that is, the stage of decrepitude. In this stage of existence, the physical changes that successively take place clog, day by day, the vital machinery, until it can no longer play. In a space of time, fixed within narrow limits, the flame of life must then inevitably expire, for the processes that feed it fail. But though, when fully come, the term of old age cannot be extended, the coming of the term may be postponed. To the preceding stage, an indefinite number of years may be added. And this is a fact of the deepest interest to human nature." 112.

Dr. S. believes, and with reason, that the division of life into periods or epochs, is not an arbitrary distinction, but is founded on physiological differences in the constitution of man at certain stages of his existence. The first two years are ranked as infantile—the next six years as CHILDHOOD. At the age of eight years, he becomes a BOY—at sixteen years he is a "YOUNG MAN"—and at 24 years, he is an ADULT. In ten years more, viz. at the age of 34, "he will have acquired his highest state of physical perfection." From 34 to 48—that is, during a space of 14 years, man is considered by our author, as remaining nearly stationary. From 48, the meridian of mind and body, there is a gradual and regular decline of the intellectual and physical powers till the age of decrepitude—84—after which the probability of life is about 4 years—the winter of old age, and the last scene of mortality!

We are not quite satisfied with the distribution of the epochs, and would rather divide them into septenniads, or periods of seven years, in each of which there is some moral or physical revolution of an interesting kind. If our author will compare page 113 with page 121, he will find a discrepancy in his own distribution. In the first mentioned page, infancy is circumscribed within *two* years;—in the other page, it is stated that "the period of infancy includes *precisely* THREE years." The errors, however, are very few, and the merits innumerable. We shall be exceedingly anxious for the appearance of the second volume, in which the *moral* attributes of man will be more particularly discussed, and in which the important subjects of education and hygiene will, we have no doubt, meet with particular attention from our author.

## ON DYSENTERY, ITS FORMS AND CONSEQUENCES IN WARM CLIMATES, PARTICULARLY IN INDIA. By *James Annesley*, Esq. Chap. IV. Vol. II. Quarto.

IN a former Number of this Journal (Vol. 15, p. 102,) we brought down the subjects of the second quarto volume of Mr. Annesley's work to the end of acute dysentery. It will now be proper to lay before our readers the substance of what this experienced writer and talented observer has said respecting "CHRONIC DYSENTERY and DIARRHŒA." These complaints are not of very unfrequent occurrence even in this country, and they are among the most common sequelæ of diseases contracted in the East, and presenting themselves to the practitioners of the West, when patients return to their native climes. They are therefore deserving of attention.

To Mr. Annesley chronic dysentery and chronic diarrhœa appear to depend on the same pathological state of the intestinal canal—differing only in degree—or perhaps in their seat. "In the former (chronic dysentery) the mucous coat and follicles of the small intestines seem to be chiefly affected;—in the latter (diarrhœa) the same textures of the large bowels are the seat of the disease." 239. The nature of the disease, he considers to be more doubtful than its seat. He is inclined, however, to view it "as the result of inflammatory action of a slow or chronic kind, occasioning organic changes in the structure of the part affected, consisting chiefly of enlargement and ulceration of the mucous follicles, with thickening and other lesions of the internal tunics of the bowel." We need not dwell on the symptoms of chronic dysentery. They are, on a small scale, those of the acute species, with the entire absence of some. The tormina are either entirely wanting, or only slight in degree, and the tenesmus is much less urgent.

> "The stools are generally more or less serous, mucous, muco-purulent, and gelatinous, containing fluid, feculent matter, and substances varying in colour

> from a white, albuminous appearance, resembling the white of an egg, to a dark olive-green, or greenish black. Sometimes they are variegated or marbled, and occasionally one day seeming like chalk and water, and on a another like a dark-coloured jelly, or the green fat of a turtle." 340.

There is little if any fever, especially in the morning; though an evening febrile movement is common in most chronic diseases.

*Chronic Dysentery* is generally the sequence of the acute form, or of repeated attacks of diarrhœa or cholera, as also of fevers and hepatitis. *Chronic diarrhœa* is, bonà fide, but a milder degree of the other disease, and, in no essential respect, differing from it—unless as to the particular locality of the intestinal canal affected, if the doctrine of our author be admitted as strictly correct. Both diseases are often associated with chronic hepatitis, and this complication has been sufficiently noticed when we were examining the first volume of the work under review.

> "Amongst these symptoms, a dark green appearance of the evacuations, indicating a morbid state of the bile; or a pale clay colour, shewing a torpid state of the liver, or obstruction of the biliary ducts: a dirty, watery, and offensive state of the stools; a pearly appearance of the eye; oppression or tightness at the epigastrium and lower part of the thorax: and sallow, muddy state of the countenance; with slight evening exacerbations of fever, and increased frequency of the calls to stool, are the most constant and prominent." 342.

The morbid secretions of the diseased liver are looked upon by our author as the cause of the diarrhœa or dysentery. Even the absence of bile is considered by Mr. A. as a source of irritation in the intestinal canal. When the disease terminates fatally, it is generally by ulceration and perforation of the intestinal tube. Sometimes the colon becomes constricted in consequence of spasmodic action long continued and accompanied by inflammation. This constriction causes accumulation and distention of the bowel above the stricture, with rupture of the gut, and extravasation of its contents. The functions of the kidneys and bladder are often disturbed in those cases. Simple and uncomplicated dysentery and diarrhœa are rarely met with in India:—they are generally complicated with hepatitis, splenitis, and other visceral affections, especially when they present themselves as the sequelæ of fevers. The causes of chronic dysentery and diarrhœa are altogether the same as of the acute forms of the disease. The appearances on dissection are somewhat different from those which we note after death from the acute form, and therefore may be worthy of record.

> "The omentum is sometimes thickened, corrugated, drawn up to the colon, or to one side: it is not infrequently adherent to some part of the bowels, or to the brim of the pelvis, and occasionally to both. The stomach and small intestines are generally much distended with an offensive gas: more rarely the small intestines are irregularly constricted and thickened in their coats; and we have even found very extensive intus-susceptions in various parts of the ilium. With respect to their colour externally, they are generally very similar to that already described as belonging to the acute disease. Occasionally, firm and cellular adhesions are found connecting the external surface of the small intestines to the omentum, or to the cæcum or colon, or even one convolution of them to another.
>
> The cæcum generally presents decided appearances of disease externally, but its internal structure is most extensively deranged; it is frequently distended

with flatus, its coats thickened, its peritoneal surface covered in parts with coagulated lymph, and the cellular substance connecting it to the abdominal parietes inflamed, thickened, and easily lacerated. The colon is frequently distended in one part and contracted in another; but it sometimes is found very much enlarged and distended throughout, and devoid of its usual divisions into cells or compartments. Coagulable lymph is often seen on its surface, firmly uniting one part of it to another, and to the adjoining viscera, especially to the liver, stomach, spleen, &c. This is most frequently observed when ulcerations have nearly perforated all the tunics of the bowel, and the inflammation proceeded to its peritoneal covering.

Occasionally, when adhesions have taken place between adjoining parts of the peritoneum covering these viscera, or when the internal ulcerations have proceeded so far as to have induced peritonitis, and the patient has lived some time afterwards, the peritoneum presents appearances of chronic inflammation throughout a greater or less extent of surface, it being greatly thickened, more vascular, and the adhesions firm and organized.

The internal surface of the bowels generally presents the most constant and most extensive lesions in the forms of disease we are now considering. The coats of the small intestines are often tumid and thickened, especially the mucous and submucous tunics, with ulcerations in every stage of their progress. Accompanying this state, there are also observed, more or less, signs of inflammatory action, either in the seat of the ulcerations or in the spaces between them. The ulcers, in chronic diarrhœa, generally commence in the follicular glands, and are most numerous in the ilium, particularly in the lower parts of it. The mucous surface surrounding the ulcerations is often thickened, elevated, and of a deeper colour than natural. Sometimes the ulcers are small, numerous, and agglomerated in patches, conformably to the disposition of the follicles of the intestines: at other times, and in different parts of the bowel, the ulcers are large, distinct, few in number, and placed distantly from each other. Occasionally the surrounding texture is pale, and the edges of the ulcers thin and soft; frequently they are elevated upon thickened bases, and their edges prominent and rounded.

Ulceration is seldom met with in the small intestines, even in chronic diarrhœa, unattended with the characteristic symptoms of dysentery, without extensive ulceration being also present in the cæcum or sigmoid flexure of the colon. When the dysenteric symptoms have been present, the disease of the rectum, colon, and cæcum, is generally very manifest, and usually consists of ulcerations similar to those now enumerated, and to those described in the section on the appearances after the more active forms of the malady. Conjoined with ulceration, a contracted state of the bowels, particularly of the colon, at its left and sigmoid flexures, is generally present; and the parietes of the intestinal canal, sometimes of the small intestines, and almost always of the large bowels, are more or less thickened. Occasionally, the coats of the colon, rectum, and cæcum, are not only thickened and internally ulcerated, but also much indurated, and converted into a gristly and semi-cartilaginous state, and generally of a very dark hue, evidently owing to the long-continued irritation and inflammatory action kept up in the part, sometimes from the nature of the disease and peculiarity of constitution, and occasionally from inappropriate treatment, as shewn in some of the following cases.

The indurated and thickened state of the coats of the intestines is a very evident result of slow inflammatory action, especially as those states are generally either associated with ulcerations of a chronic kind, or with considerable contraction of the calibre of the bowel at the part thus changed in its organization. Although not so lacerable as in those cases which have terminated fatally, the coats of the diseased intestines are generally more easily torn than in the healthy state, unless when they are of the gristly hardness already noticed.

Constriction of a part or parts of the colon, most frequently of the left arch, descending colon, and sigmoid flexure, are amongst the most constant appearances observed upon examinations after death from the chronic forms of the disease now before us. These constrictions may be few or they may be many—they are often of limited extent, resembling the ligature made by a cord, and frequently embrace a large portion of the bowel. They are generally accompanied with ulceration and thickening of the internal tunics of the intestine, but not uniformly so; and they usually present signs, either internally or externally, or both, of inflammatory action.

These strictures are, from their situation, beyond the reach of art, and little more can be done than to keep the contents of the bowels in a fluid state when we have reason to believe that they exist. But strictures also take place as a consequence of the various forms of dysentery and diarrhœa, between the sigmoid flexure of the colon and rectum, and in the rectum itself. It is chiefly to constrictions in this latter situation that attention has been directed by writers; and the idea that they are limited to the lower parts of the large bowel has been too generally entertained. A knowledge of the frequent occurrence of strictures in various parts of the colon, especially in its descending and sigmoid flexures, is of the utmost consequence in practice; and the frequent association of stricture of this bowel with that of the rectum is equally important, inasmuch as it teaches us not to confine our methods of cure to the rectum itself, but to extend them to the large bowels generally, as far as this end can be accomplished by means of gentle laxatives and emollient enemata." 349.

Mr. A. thinks that stricture of the rectum is not so common as is generally supposed. Among the Europeans in India, the colon was much more frequently affected. Contractions in the colon too often produce distention and even ulceration in the small intestines above. Several cases and dissections are given by our author, in illustration of the foregoing observations.

## Treatment.

Mr. A. properly remarks that, when the dysenteric symptoms following an acute attack consist chiefly of frequency of evacuations, without straining or tormina, the general health improving in the mean time, astringents should not be exhibited. The evacuations, he thinks, ought to be viewed as the efforts of Nature to relieve congested or sub-inflamed surfaces.

"When the motions are morbid, or attended with abdominal soreness, sense of heat, griping, tormina, tenesmus; if they be slimy, or at times sanguineous, and the patient complains much of thirst, and of fever, with restlessness at night,—the disease evidently possesses a character which must be removed by art, and which nature is generally incapable of counteracting, especially after an acute attack of disease. In cases of this description, the remains of inflammatory action should be dreaded as existing in complication with a morbid condition of the secretions; and judicious means should be resorted to, in order to remove both these states. Here local vascular depletions are necessary, especially if the patient have not been depleted early in the disease. If his strength has been lowered too far to admit of this measure, the employment of blisters to the abdomen, followed by a succession of hot poultices, and these by a thick flannel bandage, the warm-bath, and stimulating frictions upon the abdomen and lower limbs, will often prove serviceable." 369.

With the view of changing the morbid secretions, especially when the liver appears to be in fault, our author has been in the habit of giving "full doses of calomel and opium" at bed-time, and a gentle purgative in the morning—exhibiting the pil. hydrarg. with ipecacuan in the day, or rubbing in camphorated mercurial ointment on the hypochondria. At the same time, he uses emollient anodyne injections. After mercurials, the nitric acid with opium is recommended. In the latter stages of chronic dysentery, when there is much debility, infusion of cinchona, with rhubarb and tinct. opii, will be found beneficial.

"In those chronic cases which have been denominated '*white flux*,' from the muco-purulent and gleety appearance of the discharge, the muciparous glands of the large bowels are generally in a state of disease, and require the use of gentle tonics, combined with astringents, and alternated with purgatives and mercurial preparations. In the majority of these cases, the bile is either entirely obstructed, or it is secreted in insufficient quantity and quality. In order to restore the biliary secretion, and at the same time give energy to the relaxed mucous surface, of the colon, we have generally exhibited full doses of calomel at bed-time, with opium, and given the bitter aperient mixture in the morning, with advantage. Occasionally, we have also prescribed with benefit a pill, composed of aloes, calomel, and ipecacuanha, and directed an infusion of cinchona, rhubarb, and ginger to be employed, in the form of enema; or infusions of catechu, simarouba, columba, cinnamon, &c. in the same manner." 372.

In this country, where the complaint is chiefly met with among old East-Indians, great attention is necessary to keep the functions of the skin and the liver in good condition. Rest and farinaceous food are essential and opiates, alternated with mild mercurials, will be found our sheet-anchor.

## TRANSACTIONS OF THE MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH. Fasciculus the Second. January, 1835.

WE think the Medico-Chirurgical Society of modern Athens has judged wisely in publishing their Transactions through the medium of our highly-respected contemporary of the North, instead of running the risk and incurring the trouble of a separate publication. The London—we beg pardon—the Royal Medico-Chirurgical Society are differently circumstanced. The Transactions are furnished to the members gratuitously, on account of their heavy annual subscriptions, and the public takes off a number of copies, sufficient, in general, to defray the expences of paper and type. A great circulation is thus insured to the metropolitan Transactions, independently of the reviews and analyses of the particular articles in the various medical journals. There is only one inconvenience attending the plan of the Scotch Society—namely, that papers thus published are not so generally noticed in the periodicals, as if they appeared in a volume of original matter. When, however, the whole circulation of our contemporary is considered, the contributors have little to complain of—especially as our own journal and some others will give them an occasional lift. In the present article, we shall run over the papers in the order in which they stand, noticing lightly their more prominent features.

### I. HEMICRANIA. By Mr. BROWN

Two cases are related. The first patient had hemicrania of the right side of the head exactly. After lasting for some time, a discharge of blood took place, with purulent matter, from the right ear and nostril. The relief was immediate and permanent. We have no doubt that local inflammation about the frontal sinuses, the ear, and the nasal fossæ, is often the cause of hemicrania, and other forms of headache.

The second case was that of a young man, rather dyspeptic, who applied to Mr. Brown, in January, 1834, for pain in the right eyebrow, slightly affecting his vision. There was some swelling and redness of the integuments. A poultice was applied, but without benefit, as were leeches. The headache was worse every morning, and the digestive organs seemed disordered. An emetic, purgative, and quinine were prescribed. Notwithstanding these, the attack came on at 4 o'clock every morning—gradually, for three hours, and then declined as gradually. In the afternoon, he felt quite well. The tonic treatment made no impression on the complaint. A grain of opium given an hour before the paroxysm, moderated the attack, and next day stopped it entirely. Although these complaints are generally dependent on constitutional disorder, still there must be a local affection of nerve also—and this local affection deserves attention. There is, perhaps, always some topical irritation of inflammation.

### II. CASES OF INFLAMMATION OF THE ORBITAL LININGS. By Mr. CRAIG.

The first case was that of a female, aged 33, who complained of agonizing and deep-seated pain in the left eye, or rather orbit, extending to the head, and producing delirium at night. The conjunctiva was inflamed, and the eyeball prominent—iris slightly contractile—vision impaired—pulse full, and 120. Bled from the arm to 35 ounces—six leeches—calomel and purgatives. Next day the local symptoms were aggravated. Third day, stationary—fourth and fifth days, no relief—eyeball more protruded. Temporal arteriotomy to 12 ounces—leeches repeated—blisters—scarifications of conjunctiva—antimonials. Sixth day, the pain excruciating, and the patient re-applied the leeches herself. Eighth day, the eyeball was dreadfully protuberant—pulse small and feeble—sense of pulsation in the orbit. Ninth day, an abscess burst through the upper eyelid, and discharged healthy pus. The symptoms all became alleviated, and she soon recovered.

In the second case, a female was seized with severe pain in the left orbit, fever, delirium, prominence of eye, lachrymation. She was freely purged—leeched—cold applications. The pain moderated, but the eye became more prominent, and an abscess pointed towards the inner canthus, which was opened by Mr. Liston, and discharged a thick caseous matter. The case terminated favourably, though slowly.

### III. CASE OF HYDROCEPHALUS. By Dr. BALFOUR.

This case is interesting. The subject of it was a child, 13 months old, who was seized with convulsions the preceding evening, and which had continued to recur at short intervals. Dr. B. checked the convulsive fit, which he witnessed, by "the warm bath, and a stream of cold water to the head." On examination, one of the lower-jaw teeth required scarification, which was done. Nevertheless, the convulsions recurred at short intervals for several hours. It was now ascertained that the child had been feverish for a week previously—the bowels were confined—the abdomen distended—the tongue furred—pulse rapid and skin hot. The head was shaved—six leeches applied to the temples—cold applications to the head. Calomel and antimony, followed by castor-oil. Next day the convulsions were less frequent; the febrile symptoms mitigated—skin cooler—bowels opened—discharges dark and offensive. The leeches were repeated. and small doses of calomel were continued for the next two or three days. The convulsions ceased, but the fever continued. Stupor came on, with startings and twitchings of the limbs—strabismus and screaming—pulse varying from 160 to 180 in the minute. The child now fell into a torpid state, with all the symptoms of hydrocephalic effusion. In this state, friction with croton oil, and aqua ammoniæ, was employed, and produced a copious pustular eruption on the head and neck. Soon after this, there was a decided amelioration in the symptoms. The torpor became less profound, and sensibility returned. In the course of eight days, the child was out of danger.

This case shews that we ought not to despair of children, when they present the usual symptoms of hydrocephalic effusion. These symptoms, in fact, will all be produced by a turgid state of the cerebral vessels, or an inflamed condition of the membranes—therefore they are not, in all cases, beyond the chance of recovery.

## IV. On the Formation of Hydatids. By Mr. Howship.

The basis of this paper is a case and morbid parts sent to Mr. H. by Mr. Spilsbury, of Walsall, which we shall here insert, together with some remarks by Mr. Howship himself.

"A healthy youth, aged 14 years, had worked as a shoemaker till November, 1830. He said that in 1828, having drunk at a brook, he supposed he had swallowed some spawn of animal growth. On close inquiry, it appeared that he had feverish symptoms, and was frequently sick, presumably from an inflammatory cause; and these symptoms, with the incident thirst, had induced him to drink freely at the brook. The following summer he frequently coughed up blood, and very frequently bled from the nose. His mother spoke of him as a hearty boy previous to drinking at the brook, and said she was herself convinced that he had living animals of the newt kind within him.

During life, from the distinct lobulated feel of the different tumours with which the enlarged abdomen was filled, it appeared probable it might prove to be fungoid disease, of some of the viscera, especially as the superficial veins of the abdomen were enlarged and tortuous. Neither the appetite nor the secretions ever failed, with the exception of the bile, with which the skin and urine were highly tinged, the stools being white. The enormously enlarged abdomen measured six feet in circumference; the legs and thighs being loaded with œdema, while the thorax and arms were amazingly extenuated. He died on the 7th November, 1831.

On laying open the abdomen, Mr. Spilsbury found the whole of the viscera one confused mass of tumours, of which a large portion was, by dissection, detached from the right side. In opening the duodenum, a pulpy sac, like coagulable lymph, was cut into, containing probably a full pint of small hydatids, the largest about the size of a hazel-nut. These hydatids were of various tints, from a deep green to a bright yellow, swimming in a thin serous fluid.

The whole of the bowels and other viscera were equally involved in this disease; the continued pressure from which appeared to have very much reduced the size of every viscus by exciting interstitial absorption. The liver, in particular, was diminished in thickness almost to the peritoneal coat, not more than about half an inch of its parenchymatous substance remaining.

The thorax was not inspected, for the limited time afforded did not permit the whole of this extensive disease being unravelled. In the cavity of the abdomen the adhesions were so numerous and intimate that there was neither beginning nor end; the examination, consequently, was only so far satisfactory as the time would permit.

On carefully dissecting the parts forwarded to me, I found that the mass removed from the right side, although composed of different textures were certainly an entire new formation. It appeared that acute inflammation had, in the first instance, led to a free effusion of fibrine into the abdomen; that, as the fibrinous matter became organized, new vessels after a time began to secrete serum (at certain points) into the substance of the fibrine; thus inducing the development of serous cysts. These tumours had the appearance of extremely fine thin organized adhesions; and a considerable number of these cysts, some nearly of the size and form of hen's eggs, most of them of a spheroidal figure, and all connected together by extensive fibrinous adhesions, constituted the large mass removed from the right side of the abdomen.

The partial detachment of the external coat, from several of the tumours, ascertained that each organized, coloured and vascular cyst, contained within it a fine colourless albuminous cyst; devoid of red vessels, and having every character of what Mr. Baillie has termed the true hydatid." 15.

Mr. H. makes a great many other and ingenious observations on the formation and growth of hydatids, for which we must refer to our contemporary of January last.

## V. RUPTURE OF THE TENDON OF THE BICEPS FLEXOR CUBITI. By Sir GEO. BALLINGALL.

Mr. D. an eminent chemist, aged 50 years, while lifting a heavy weight with the tips of the fingers of the right hand, felt a snap, accompanied by pain in the lower part of the arm, a little above the elbow. The weight dropped from his hand, and there was a loss of power in that member. Swelling took place, and there was observed a large tumor at the middle of the arm, occupying the belly of the biceps muscle. A bandage was applied, but when removed the next morning, the nature of the accident was evident.—The tendon of the biceps could be felt loose at one extremity, in the hollow left by the retraction of the muscle. Bandages, consisting of two pieces of leather accurately laced—one on the arm and the other on the forearm, with a strap passing from the one to the other, in order to keep the arm bent. The tendon gradually contracted adhesions to the neighbouring parts, and the patient can use his arm tolerably well.

## VI. ON THE LATE INFLUENZA IN EDINBURGH. By Mr. W. BROWN.

During the prevalence of the epidemic, the practitioners had something better to do than write about its nature. We need not dwell on it here, as there is not a chemist's apprentice in London who did not become intimately

—indeed personally, acquainted with the epidemic, as it prevailed in 1833 Though simulating, it was something more than a mere catarrh. The catarrhal symptoms were violent, the fever high, and the progress rapid. The debility which followed the attack was most surprising—many people having never yet recovered their former strength. In the bustle and confusion, it was difficult to determine what was the best mode of treatment. Thousands of people had the disease, and violently too, without any remedies at all. They probably fared as well as those who had—"the best advice"—and plenty of physic into the bargain! Those who kept to their beds, and took abundance of diluents, so as to promote perspiration, got through the epidemic best. There was something so debilitating about the disease, that bleeding was seldom necessary except in particular constitutions, where the inflammatory symptoms ran very high—and more especially where bronchitis continued after the epidemic itself had vanished. The sequelæ of the influenza, indeed, were infinitely worse than the epidemic itself—and many thousands have since died of these sequelæ. All the evidences of contagion in cholera were here ten times stronger, and yet very few medical men will stand up for contagion in influenza. Cullen, and, indeed, our Caledonian brethren generally, have evinced an itch for contagion beyond those of most other countries, as may be seen by the great nosologist placing a series of epidemics under the title of "*catarrhus a contagio*," and the great expense of gunpowder and vinegar which our neighbours incurred during the epidemic cholera, by way of destroying the virulent infection of that highly communicable disease. Our present author, however, is a very moderate contagonist in influenza—indeed he may be ranked amongst the contingent contagonists. The immediate mortality of the disease in Edinburgh was not considerable. It was in its sequelæ that it was formidable.

### VII. EPIDEMIC SCARLATINA—HERIOT'S HOSPITAL. By MR. WOOD.

This epidemic occurred in the last three months of 1832. The establishment contained 179 boys, of whom 44 became affected with the disease. Thirty-three out of the 179 were supposed to have had the disease previously —and 5 out of 44 were considered second attacks. The fever could not be traced into the hospital, and it occurred while the establishment was under strict quarentine to keep out cholera! The epidemic was a mild one. and only one patient died out of the 44. The fever ran pretty high, and delirium was not unfrequent. In all cases there was more or less affection of the throat, though in some it was very slight. In none of the cases was there any extensive sloughing. The treatment was simple. Purgative medicines were exhibited daily till the fever subsided, and continued at intervals afterwards till the patient was considered cured. The purgatives were compound powder of jalap, epsom salts—colocynth, senna, &c. The patients were kept moderately cool, and the rooms well ventilated. During the eruptive fever, when the skin was very hot, the surface was sponged, sometimes with cold, sometimes with warm water. Great relief was derived from this practice. The patients were kept on the lowest scale of diet, unless the fever assumed a typhoid form, when some wine was allowed. Nine out of the 44 cases were followed by dropsical effusion. The average appearance of the effusion was nineteen days after the commencement of the fever. The one fatal case was from the dropsy. On dissection, a great deal of vinous engorgement appeared in the brain, and considerable serous effusion had taken place between the membranes and in the ventricles. There was but a small quantity in the abdomen. This dissection is not given from the author, but from a long paper reprinted from Dr. Hamilton's Work, relative to an epidemic of the same kind in 1804.

### VIII. RECOVERY FROM SUSPENDED ANIMATION. By Dr. M'WHIRTER.

Dr. M'W. offers this case by way of encouragement to his obstetric brethren, "who must occasionally meet with cases of new-born infants *suffering* from suspended animation." We confess that this is a new feature in physiology—*suffering* from suspension of life. Be this as it may, the Doctor used every energetic measure for restoring sensibility to his little patient, and, by bringing it into a troublesome world, has, we fear, been the innocent cause of much more *suffering* than it experienced during the *humane* process of the resuscitator. After the common means were used for nearly half an hour, without success, and after "nearly two bottles of brandy and whiskey had been expended on frictions," &c. besides, "slapping the bottom" occasionally, a sob was observed—but it was nearly an hour and a half before "the child gave a whimper." The Doctor deserves a laurel crown—and we think Malthus himself, could he look from the grave, would say AMEN.

A very able paper of 20 pages, on "Thoracic Pathology," by assistant-surgeon Poole (32d regiment), follows the Medico-Chirurgical Transactions, and we wish that our limits would permit us to notice it at some length. It consists, however, of cases minutely detailed, and which we could not condense nor analyze. The case of gangrene of the lungs, following an attack of cholera, and where there was collapse, with absence of pulse for 24 hours, is exceedingly interesting, and, indeed, the whole paper is very creditable to Mr. Poole.

## ON THE PREPARATION AND MEDICINAL EMPLOYMENT OF ACONITINE, BY THE ENDERMIC METHOD, IN THE TREATMENT OF TIC DOULOUREUX AND OTHER PAINFUL AFFECTIONS. By *Alex. Turnbull*, M.D. Octavo, pp. 48.

WE are very far from wishing to discourage the trial of new and active remedies; but we begin to perceive a strong disposition to trust to *specifics*, rather than to study *indications*, and ascertain the best time and manner of applying old and established remedies. A tolerably wide range of observation and experience has taught us the superiority of the latter over the *former* species of knowledge. The practice of *specifics*, however, will always have the greatest number of followers, for very obvious reasons—but specially because it saves the necessity for labour and study. As there will ever be a considerable number of the profession who will devote themselves both to the study of indications, and to the employment of active or specific remedies, it is the duty of the journalist to direct attention to all the ways and means which human ingenuity may develop for the removal of corporeal maladies—and hence the short notice which we here insert of the publication under review.

It appears that there is a fear in the author's mind, lest the honour of first introducing this new poison, the aconitine, into practice, should be shared by our very talented friend and practical physician, Dr. Roots. But we encourage Dr. Turnbull not to despair. If aconitine prove doubly more useful than veratria, the Doctor will not lose posthumous fame by the omission of his name in conjunction with either remedy. We think we may safely say, that veratria is gone to the tomb of the Capulets—and that it will only be remembered, ten years hence, by those who have smarted under its effect without benefit, or suffered in their pockets by the expense of its purchase. Its promulgator will not accuse us of throwing cold water on the discovery, nor ought he to complain if, with even-handed justice, we declare our conviction, that the veratria will soon cease to be a remedy in the hands of the judicious practitioner. In the same course of honest, well-meant, and independent principles, we proceed to make our brethren acquainted with the new candidate for remedial fame.

## PREPARATION.

"A quantity of the fresh root of the Aconitum Napellus must be procured, and care should be taken that it be sound, and that the root be that of monkshood; for sometimes other roots are sold for it. Let it be carefully and cautiously dried, and then reduced to powder; this latter operation is not unattended by danger, especially if a part of the fine dust which rises from it be inhaled. One part by weight of the powder, and two parts by measure of strong alcohol, are to be digested together in a gentle heat for seven days, and the tincture, while warm, is to be filtered. It is then to be reduced to the consistence of an extract, by careful evaporation, at a low and well-regulated temperature; the object of this, is to prevent the destruction or expulsion of the active principle, which would very probably ensue, if the temperature employed were higher than barely sufficient to carry off the alcohol. To the extract thus prepared, liquid ammonia is to be added, drop by drop, and mixed well with it, to precipitate the alcaloid; and in this part of the process, care must be taken that too much be not added, as in some instances the product appears to have been decomposed by inattention to this circumstance. It is difficult to give a precise rule as to the quantity; but enough will have been added, if the extract give out the odour of ammonia, when stirred.

The mass now consists of impure Aconitine, mixed up with a quantity of extractive and other matters, soluble in water; and it may be taken up either with boiling alcohol, or sulphuric ether; or the soluble matter may be removed, by repeated washings with small quantities of cold water, which will leave the Aconitine. This latter process is the one we have generally employed, and is performed by pouring a little water on the extract, and mixing them carefully together, then allowing the undissolved part to subside, pouring off the fluid, and repeating the operation, as long as any soluble matter is taken up, a quantity of light brown or gray powder is left, which may be purified by subsequent solution in alcohol. This powder contains the active properties of the Aconite, in a high degree of concentration. A grain of it was dissolved in a drachm of alcohol; and twenty drops of the solution put into the mouth of a guinea-pig, occasioned death in a few minutes. Other experiments have been performed; all of which prove the extreme energy of the substance.

The second process consists in dissolving the alcoholic extract prepared as before, without the addition of the ammonia, in as much cold water as will take it up, and carefully decanting the solution from the insoluble part, and then filtering it. To the filtered solution, liquid ammonia is to be added, drop by drop, as long as it occasions any precipitation. When the precipitate has subsided, the supernatant fluid should be carefully poured away, or drawn off by means of a syphon; and after the precipitate has been deprived of as much of the fluid as possible, it should be purified by a sufficient number of washings with small quantities of cold water, and then carefully dried. The product obtained by this process is white." 15.

We would advise those who mean to test the aconitine, to procure it from Mr. Morson, as the process of preparation is far from being an easy one. The action of the new medicine on the skin is said to be weaker than that of either veratria or delphinia—"for in no case, hitherto observed, has it produced a greater degree of vascular excitement than might easily be accounted for *by the friction itself*." It is by no means impossible that this remark might be extended to more than the *vascular system*. The diseases to which Dr. T. has applied the aconitine, are tic douloureux and neuralgic affections generally. But after the magic cures performed by the veratria, why employ the aconitine! The formula is as follows:—

℞. Acontinæ, gr. ij.
Alcohol, gtt. vj. tere bene.
Et adde Axungiæ, ʒj. Misce ft. Unguentum.

The proportion of the active ingredient may be gradually increased.

One or two imperfect cases are related by Dr. Turnbull himself, and one reprinted from the Medical and Surgical Journal, for December, 13th, 1834, which was treated by Dr. Roots at St. Thomas's Hospital. To these we may refer those who are desirous of giving a "fair trial" to the new candidate for fame and favour.

## Outlines of Medical Botany. By *Gilbert T. Burnett*, F.L.S.

London: 2 Vols. 8vo. pp. 1190.

It is a problem of the highest philosophical interest, but one which is abstruse and difficult in the extreme, to arrange the almost countless productions of the vegetable kingdom according to some natural affinities, which shall be at once authentic, unvarying, and of easy recognition. The master mind of the great Swedish botanist certainly achieved a more distinguished success in this arduous undertaking than had been done by any previous to his time; and almost all his successors have paid the homage due to his transcendant talents, by adopting, with varying modifications indeed, his views as a groundwork of the classifications which they have proposed. The division of plants into such as are flower-bearing, and, therefore, seed-bearing; and such as are destitute of inflorescence, and are, therefore, seedless, was proposed first, we believe, by Ray, the old English botanist. The former are grouped together by Linnæus under the general denomination of phænogamous, *i. e.* having to use the metaphorical language of his system, an obvious and distinct marriage or mode of generation. They are all provided with the essential parts of a flower, viz. the stamens and pistils (which it is well known are regarded as the male and female organs), either on one plant, or on different plants of the same species. These two parts are necessary for the formation of a genuine seed—we add the word "genuine" to mark the difference between the product of the bisexual vegetable union, just noticed, and the falsely-called seeds of ferns, mosses, mushrooms, &c. which the botanist distinguishes by the name of spores, or sporules. The former, the genuine seed, consists of several parts which are generally and easily demonstrable, viz. a minute body called the embryo or plantule, a reservoir of food laid up for its support during the infantile period of its growth, which bag of starch is called the albumen, and the cotyledons, or seed-lobes, which are closely attached to the embryo, and either ascend out of the ground, and perform for a while the office of leaves, or remain buried till they gradually decay. The latter, or spores, are destitute of radicle and plumule (the two parts of the embryo), and also of any distinct cotyledon; they have the power of striking root indifferently from any part of their surface. They have, therefore, the character rather of buds than of seeds; and it is a curious coincidence, that many of the "spore-bearing" plants are reproductive in another way, viz. by portions (frustula or gonidia) becoming detached from the parent stem, and forming independent and self-existing plants. The second division of the vegetable kingdom includes all plants which are called cryptogamous, or whose marriage or mode of generation is hidden or unknown; they are destitute of flowers, and, therefore, of seeds, and are propagated either by spores or by frustules.

From the preceding brief details, it is obvious that the terms phænogamous and cryptogamous are equivalent or nearly so, to the more recent terms, cotyledonous and acotyledonous (and these, again, are synonymous with seed-bearing and seedless), which have of late been very generally adopted. This twofold division is the first step in the synthetic classification of vegetables; the second is the almost equally important splitting of the first class into such plants as have seed provided with one cotyledon, or seed-lobe, and hence called mono-cotyledonous, or uni-lobate; and into such as have two cotyledons, and are, therefore, called dicotyledonous, or bilodate plants.

The tripartite division into acotyledonous, monocotyledonous, and dicotyledonous orders, apparently so arbitrary and gratuitous, is found to harmonize with, and also to indicate, at least in many very important respects, other natural affinities which may be said to establish strong family resemblances among certain extensive groups of the vegetable world.

If we examine the structure or tissue of those plants which belong to the class cryptogamia, and which are, therefore seedless, or acotyledonous, it will be found that in all, with the exception of the ferns, it is uniformly, and throughout every part, truly cellular or vesicular, *i. e.* composed solely of an infinitude of cells or cellulus, and presenting no traces of vessels or lengthened tubes. Hence the epithet "cellulares, or cellulosæ," has been applied to this large section of the cryptogamic class. In addition to this structural difference, it is said that the tegumentary covering of these plants differs from true cuticle, in being scarcely distinguishable from the cellular substance which it incloses, and in being destitute of stomata, (which are generally signs of the presence of tubular vessels,) that their leaves, when present, are without a pleuro-phyl, or skeleton; and that their stems, even when apparently endogenous, are unstratified and homogenous. Although these definite characters are on the whole strictly and exclusively applicable to the three earliest orders of the cryptogamic class, viz. the algæ, fungi, and musci, it must be confessed that certain exceptions have been pointed out to their universal truth by some eminent botanists. Thus the aquatic tribe of the charalos, including the two genera, chara and nitella, vulgarly called stoneworts, exhibits "a structure so peculiar, that every attempt to associate them with other orders has failed; and even the propriety of their location among the mosses is not unquestionable. The cellules are so much extended that they must be regarded as tubuli, and they thus mark the transition of cells into tribes, or the change of vesicles into vessels, commonly so called." Again, in sphagnum, and one or two other instances, it is asserted that tubular vessels have been found, as well as fibro-membranous cells, which are the rudiments of spiral tubes. Hooker and Mirbel have discovered also in some few cases perforations in the leaves, and these they have proved to be genuine stomata which were previously denied to be present in any of the mosses, or their allies, and indeed in any plants lower in the scale than the ferns.

If the objections now adduced be found on subsequent enquiries to be authentic, the propriety of the epithet "cellulares," or "cellulosæ," as characteristic of the three first orders of cryptogamic plants, may be fairly impugned on this ground alone; but there are other more weighty arguments, which recent botanical discoveries have most unexpectedly afforded.

There are certain splendid oriental parasitical plants, and several others, natives both of Europe and of America, which exhibit a most distinct inflorescence, and yet which are strictly "cellular, or almost vascular," in their structure. Here then the deductions from vegetable anatomy are at variance with the laws or general facts (for these are synonymous terms) of vegetable physiology, and therefore with the bases of a natural classification of plants. We see plants, which on the one hand are provided with gigantic flowers, of a yard and upwards across the disk, and which, on the other hand, by their destitution of tubular vessels, and their fungoid characters, (of having no leaves, and being parasitic in their growth,) shew their close affinity to the lower mushroom sections; thus seeming to form the descending links which connect the highest with the lowest grades of vegetable development.

It is however but proper to mention that, within the last year, Dr. Brown, who, when he published his admirable monograph on the Rafflesia Arnoldi, asserted its exclusively cellular structure, has communicated to the Linnæan Society the results of some more recent observations, which have led him to modify considerably his former opinion. He has found tubular vessels in the bud-scales of the Rafflesia; but "they were very few in number, and not only spare, but also oftentimes imperfect." The fruit likewise he describes as being not quite so simple as had been previously supposed; for although "the seeds consist of a soft and nearly homogeneous mass, albumen and embryo are distinguishable, and hence, although spore-like, they are not veritable spores." But while we admit the correctness of these remarks, and whoever is acquainted with the pre-eminent talents of Dr. Brown, will at once be prepared to assent, the conclusion is still forced upon us that the Selanthi, including the cytini, (the hypocist of the ancients,) cynomorium or fungus melitensis, (Maltese mushroom,) brugmansia, rafflesia, &c. are essentially of a cellular texture, and approximate to some cryptogamic plants by being destitute, or nearly so, of tubular vessels; by having no leaves, the foliage consisting of brown or colourless scales; and by their seeds often consisting of a mass of homogeneous grumous matter.

Whoever has followed us attentively through the preceding page, will now be able to appreciate the motives which have induced Professor Burnett to reject the nomenclature of Decandolle and other botanists, who have associated all cryptogamic plants under the general denomination of "cellulares," or "cellulosæ." Equally potent objections may be urged against employing the epithet acotyledonous as the title of the first great division of the vegetable kingdom; for if we admit this, we shall be necessitated to groupe together plants which differ very much in their essential attributes; and therefore to dissociate some from the natural groupes or families to which they evidently belong;—we allude particularly to the curious tribe of ferns which, although cryptogamic and acotyledonous, are nevertheless well known to bear so close a resemblance to the palms, that almost every botanist agrees that with these they ought to be classed in a natural arrangement. Influenced, no doubt, by these arguments, Professor Burnett has proposed to substitute the term "myc-affines," anglice "moss-allies," as a general or family name for the first great division of the vegetable kingdom, in which are included the algæ, fungi, and musci; those plants which he has defined as "cellular, flowerless, seedless, and propagated by spores, sporidia, or pustules." By employing an arbitrary epithet, which has no reference to any hypothetical affinity in the anatomy or physiology of the plants, he avoids the objections, which we have shewn, may be urged against the terms "cellulares" and "acotyledones." We could have wished, however, that he had been more fortunate in his philological selection. A Greek noun and a Latin adjective are reluctantly wedded together, to form a most inharmonious compound. The remarks, however, of the ingenious author on this subject at page 43 deserve an attentive perusal, and may perhaps reconcile the reader to the cacophony of the epithet.

Having thus explained the principles on which the first great section of the ternary classification of plants is founded, and mentioned the title which our author proposes to affix to it, our readers will experience but little difficulty in appreciating the distinctive characters of the remaining two sections, denominated in the present work "termaffines" and "crescaffines," (the meaning of which terms, analogous to the preceding one "mycaffines," will be apparent immediately). The plants of both sections have this important feature in common—that their tissue or structure consists not of cells alone, as in the families of the preceding section, but of tubes or vessels and of cells, more or less irregularly connected together. They are all, therefore, "cellulo-vascular," or, in the language of Decandolle, simply "vascular." So far they agree; but a most important difference in the arrangement of the cells and tubes, and in several other equally obvious and distinctive characters, exists in the two great sections of vascular plants. In the first section, the tubes and cells are interblended in one mass; and there is no distinction of parts for the ascent and descent of the sap. The bark cannot be distinguished from the wood, nor any layer of new or sap-wood from another layer of an older formation. Hence such plants have been called "unstratified;" and from the circumstance of the annually new fibres, by which the vital actions of the plant are performed, being always deposited centrally within, or interior to the older ones, (which are therefore gradually pushed outwards to the surface, so that the external parts are always the oldest and hardest,) they have also received the appellation of "endogenæ," or "inside-growers."

In the second section of vascular plants the arrangement of the cells and tubes is much more regular: and instead of the unstratified texture of the "endogenæ," we find a beautiful series of concentric woody circles or layers surrounding a central pith, and surrounded by an external series of different form, and size, and thickness, which constitute the bark.

It is well known that the concentric layers, now mentioned, are indicative of regular and annual successive deposits, each new one being exterior to those already formed. Such a growth may therefore be truly said to take place outwardly, and hence all plants in which the structure now mentioned is found, have been denominated "exogenæ" or outside growers. Besides this essential difference of structure, we may state that, the external form of the trunk is conical and not cylindrical, as in the endogenæ; it is branched not simple; the leaves are articulated with the stems or branches; the embryo consists of two seed-lobes, and the radicle is naked. Such are the two great sections or divisions of the class "vasculares," a class which includes the whole vegetable kingdom, with the exception of the three orders, algæ, fungi, and musci, which we have already shown to be cellular in their structure. The ferns (an acotyledonous tribe of plants) and all the monocotyledones, such as the grasses, the rushes, the liliaceæ, the lordly palms, and the graceful musæ, belong to the "endogenæ," while the dicotyledones, commencing with the very natural groupe of the pines and coniferæ, and comprehending the countless varieties of plants, whose seeds are invested with a peculiar covering called a pericarp, (known commonly as the fruit,) and which were therefore associated by the older botanists under the general terms of fruges, eucarpæ, or, according to the Linnæan language of herbs and trees, are all grouped together, as being strictly "exogenous" in their growth. It requires however to be stated, that some apparent exceptions to the universality of the doctrine inculcated in the two epithets "endogenæ" and "exogenæ," have been recognized by botanical physiologists. Thus the dracæna, or dragon's-blood tree, one of the liliaceæ, "the structure of whose unstratified stem would decidedly place it amongst the endogenæ, even if no reference were made to its foliage, and monocotyledonous seeds, is still any thing strictly endogenous, *i. e.* inside growing: its stem is branched, is not cylindrical, and increases in girth, as it increases in age." Again, the pandanus among the typhinæ, the branching asphodelaceæ, and also the smilaceæ, &c. having a vein-like reticulation of their leaves, &c. may be adduced as examples of deviation in various ways from the strict and leading characters of the groupe.

Our readers will now be prepared to understand the motives which have led our author to propose two new terms, in the place of those introduced by Decandolle, viz. endogenæ and exogenæ. All endogenous plants, from the very mode of their growth, are necessarily of very limited duration; for, as the peripheral layer of their stems becomes firmer and harder each year, in consequence of the internally deposited formation causing a gradually increasing pressure from within outwards, a period at length arrives when this hardened outer girth becomes unyielding, and the internal space being filled up, no further deposits can take place, and the plants inevitably die.

"The term of their existence (says Prof. B.) being thus fixed during their earliest years, which the very act of growth renders more and more inevitable, and which is strengthened by their strength, may not improbably have led the ancients to apply the name 'termes' to a palm-tree, as well as to the fruit branches of other plants, when plucked, and a period put to their existence; and hence the region in which this peculiar characteristic is found to prevail may be called 'term-affines,' as indicative of this, one of the most notorious diagnostic signs."

On the other hand, the mode of growth in exogenous plants sets no necessary limits to the term of their duration. The new deposits are external to the old ones, and as there is, at the same time, an annual reproduction of bark, no constriction, such as takes place in the former class, the "term-affines," is induced,—a constriction which we have explained to be the cause of the very limited existence of these last mentioned plants.

The natural tendency, therefore, of the exogenæ is to increase, year after year, in circumference as well as in height; and the prodigious dimensions of some oaks, chesnuts, and baobabs, attest their extreme antiquity. What shall we say of trees, with trunks of 100, and even 150 feet in circumference, and whose ages are upwards of 2000 years. This tendency to mighty increase of dimensions, and to very protracted duration, constitutes a very striking characteristic of exogenous plants, the structure of which sets naturally no limit to their existence. The term "cresc-affines" has been, for these reasons, proposed by our author to designate this very extensive, and by far the most important, division of the vegetable world.

It is not our intention to discuss the appropriateness of the nomenclature which Professor Burnett has substituted for that of Decandolle and other botanists; we may fairly leave this topic to the judgment of the reader, and, if we mistake not, the verdict will be nearly unanimous. It may be allowed to be ingenious; but it is far too vague in its allusions, as well as unclassical in its composition, to be received with much favour. Fortunately, the merits of these Outlines are not suspended on so frail a thread as the fitness of any part of its scientific language. They will be found to contain a greater accumulation of curious and instructive details on botanical subjects, than any other English work with which we are acquainted.

The unwearied labour and ardent love of his favourite science displayed in every page, reflect the most distinguished credit on Professor Burnett, and deserve to be rewarded by the patronage of the public in general, and more especially of the medical profession. We might have wished that the author had, for his own sake, given a more appropriate title to this work than "Outlines of Botany"—a title which is apt to convey a very imperfect notion of its contents; for, independently of a general review of the whole vegetable world, the reader will find a more or less detailed description of almost every genus of plants, with pertinent remarks on the more curious facts of their physiology, of their medical and dietetic processes, and of their geographical and geological distribution; and wherever the subject admits of illustration by the pencil, the aid of the draughtsman has been called into very pleasing requisition. Many of the woodcuts are indeed excellent.

## A TREATISE ON INSANITY, AND OTHER DISORDERS AFFECTING THE MIND. *By J. C. Prichard*, M.D. &c. Octavo, pp. 483.

THOUGH the attention of Dr. Prichard appears to have been directed to the subject of insanity for twenty years past, yet it was the construction of the article "INSANITY," in the Cyclopædia of Practical Medicine, that gave origin to the present work, which is an extension and completion of the said article. We have every reason to believe that the CYCLOPÆDIA may prove a kind of ALMA MATER, whence will issue many a monograph that would not otherwise have seen the light. It will thus prove useful in a twofold manner to the public—it will stimulate individual writers to greater exertion, and diffuse knowledge through a great mass of readers.

The work is dedicated to M. Esquirol, a physician who has dedicated great attention and many years to the investigation of this class of human afflictions. In his preface, Dr. P. assigns as one reason for the publication, a conviction that some notions generally prevalent, and sanctioned by the highest medical and legal authorities in this country, in respect to insanity, are not only erroneous, but the "sources of great practical evils." This is certainly a good reason for coming before the public; but there are very many reasons why a man of Dr. Prichard's talents and experience should devote his powers to the investigation of such a difficult subject as that under consideration. The work is divided into twelve chapters, each being subdivided into numerous sections. The ramifications of the discussion, indeed, are so multifarious, that the study of the subject appears to be a most formidable task, and many will be deterred from the undertaking. We shall only be able to notice a few of the early chapters in this article, reserving for next number a more copious analysis of this important work.

### CHAP. I.—DEFINITION—NOSOGRAPHY OF INSANITY.

Definitions of diseases have always proved great stumbling-blocks to nosologists. Insanity does not exhibit an exception. It has had various definitions, none of which will apply to all cases. The disturbances of the mental operations present very different phenomena in different forms of the disease, and they cannot be described in a collective statement, without first considering the principal varieties. These our author enumerates—demolishing, as he proceeds, the definitions of Locke, Cullen, Sauvages, Linnæus, Pinel, and others. The four principal varieties, then, are thus arranged.

"1. *Moral Insanity*, or madness consisting in a morbid perversion of the natural feelings, affections, inclinations, temper, habits, moral dispositions, and natural impulses, without any remarkable disorder or defect of the intellect or knowing and reasoning faculties, and particularly without any insane illusion or hallucination.

The three following modifications of the disease may be termed *Intellectual Insanity*, in contradistinction to the preceding form. They are severally:—

2. *Monomania*, or partial insanity, in which the understanding is partially disordered or under the influence of some particular illusion, referring to one subject, and involving one train of ideas, while the intellectual powers appear, when exercised on other subjects, to be in a great measure unimpaired.

3. *Mania*, or raving madness, in which the understanding is generally deranged; the reasoning faculty, if not lost, is confused and disturbed in its exercise; the mind is in a state of morbid excitement, and the individual talks absurdly on every subject to which his thoughts are momentarily directed.

4. *Incoherence*, or dementia. By some persons it may be thought scarcely correct to term this a form of insanity, as it has been generally considered as a result and sequel of that disease. In some instances, however, mental derangement has nearly this character from the commencement, or at least assumes it at a very early period. I am therefore justified in stating it, after Pinel, to be a fourth and distinct form of madness.

It is thus characterized by that justly celebrated writer:—'Rapid succession or uninterrupted alternation of insulated ideas, and evanescent and unconnected emotions; continually repeated acts of extravagance; complete forgetfulness of every previous state; diminished sensibility to external impressions; abolition of the faculty of judgment; perpetual activity.'" 7.

Few of our readers will fail to perceive that the first form—*moral insanity*—is applicable to nine-tenths of society—nay, to ninety-nine in the hundred! Who is it that is not sometimes affected by "a *morbid* perversion of the natural feelings, affections, inclinations, temper, &c. without any remarkable disorder or defect of the intellect, &c.?" Not one! This moral madness is the universal disease, or rather state of man, and is that to which the Roman bard alludes—"insanire omnes, &c." Then, again, between the 3d and 4th species, at least according to Pinel's definition, it will often be hard to draw the line of distinction. In the one case, the individual "talks absurdly on every subject"—in the other, the ideas are in rapid succession, or uninterrupted alternation. The *latter* appears to be only a higher degree of the *former*. Be this as it may, the author has wisely determined to substitute for a definition "a short nosography of the disease," or summing up of the characteristics of the different forms.

> "We may, then, describe insanity as a chronic disease, manifested by deviations from the healthy and natural state of the mind, such deviations consisting either in a *moral perversion*, or a disorder of the feelings, affections, and habits of the individual, or in *intellectual derangement*, which last is sometimes partial, namely, in *monomania*, affecting the understanding only in particular trains of thought; or general, and accompanied with excitement, namely, in *mania*, or *raving madness*; or, lastly, confounding or destroying the connexions or associations of ideas, and producing a state of *incoherence*." 7.

The next four chapters are, accordingly, dedicated to "an accurate and tolerably complete description of the phenomena of insanity," as arranged under the above heads. We cannot follow our author through these sections. It is evident that, in the first, or moral insanity—the "*folie raisonnante*," or *rational madness*, of Pinel, Dr. P. describes a disease much graver in grade than what we would conceive by the definition already quoted. "The individual himself has been discovered to have suffered, in a former period of life, an attack of madness, of a decided character." "He has become an altered man"—"he is continually engaging in new pursuits"—his affections become totally perverted—manifesting dislike or even enmity towards his best friends—in short the man is deranged, though, before a jury or an inquisition, his answers will often be so pertinent as to puzzle the arbiters of his fate—including even the Doctors! These are the kinds of cases that bring scandal on our cloth by eliciting such contradictory evidence from different medical witnesses. And no wonder—for the disease or disorder is nothing more than a higher grade of that under which we every one labour, from the king on the throne to the beggar in the streets! We are strongly inclined, therefore, to agree with M. Georget, in terming this species the *first stage* of insanity—"the incubation of madness"—even although it may last many years, or through life, with running into monomania or general insanity—incoherence. In not a few of these cases of "moral insanity," the tendency to gloom and melancholy is a prominent feature. The faculty of reason is not manifestly impaired, yet sadness clouds all the prospects of life—the individual, though surrounded by comforts, and at peace with himself and all the world, yet becoming sorrowful and desponding. All things, present and to come, are involved in gloom, and persons thus affected (if of good education) often express poignant grief at the inaptitude which they experience to go through the active duties of life. They often feel a horror of suicide, to which, nevertheless, they seem to be prompted by some diabolical instinct or internal feeling. They are, therefore, fearful of being left a moment alone. Such cases often terminate in recovery. People of an opposite character give themselves up to *tædium vitæ* and morose disgust, loathing their existence—and sometimes putting an end to it by their own hands. The almost infinite variety of shades which this species of insanity exhibits is well and ably delineated by our author, and we must refer to the work itself all our readers who desire to have ample information on the subject.

The section (II.) on Monomania, is ably handled by our author. All medical men are aware that patients, labouring under this form of insanity, evince some peculiar illusion or erroneous conviction as to a particular subject, and are incapable of reasoning correctly on any topic connected with that particular subject, though on all others they are rational enough. It was termed melancholia by Hippocrates, though it is by no means consistent with the fact, that this species of derangement is essentially of a gloomy character, or connected with sadness and despondency. Some patients of this description are proud and elated, fancying themselves kings or emperors, and appearing to be really happy in their illusions. Melancholia originally meant what monomania now infers. Dr. Prichard differs from the generally-received impression, that monomaniacs are rational except on one particular topic.

> "Cases are indeed on record, which, if faithfully related, fully come up to this description. In general, the real character of monomania is very different. The individual affected is, under ordinary circumstances, calm, and exhibits no symptom of that perturbation and constant excitement which are observed in raving madness. But on careful inquiry it will be found that his mind is in many respects in a different condition from that of perfect health. The habits and disposition have, perhaps, been long, in a greater or less degree, in the state which characterizes moral insanity. If we advert to the order and connexion of morbid phenomena, we often learn that on a settled and habitual melancholy, or on a morose and sullen misanthropy, long growing and indulged, or on some other disordered and perverted state of the feelings and affections, a particular illusion has more recently supervened. An individual of melancholic temperament, who has long been under the influence of circumstances calculated to impair his health, and call into play the morbid tendencies of his constitution, sustains some unexpected misfortune, or is subjected to causes of anxiety; he becomes dejected in spirits, desponds, broods over his feelings till all the prospects of life appear to him dark and comfortless. His inclinations are now so altered that no motive has sufficient influence over him to rouse him to voluntary and cheerful exertion. During this period, if questioned as to the causes of his mental dejection, he will probably assign no particular reason for it. At length his gloom and despondency becoming more and more intense, his imagination fixes upon some particular circumstance of a distressing nature, and this becomes afterwards the focus round which the feelings which harass him concentrate themselves. This circumstance is often some real, occasionally some trifling act of delinquency, for which the individual expresses the strongest and perhaps disproportionate self-condemnation. In other instances an unreal phantom suggests itself, in harmony with the prevalent tone of the feelings, which at first haunts the mind as possible, and is at length admitted as reality. Other individuals begin by indulging morose and unfriendly sentiments towards all their acquaintance, magnifying in imagination every trifling neglect into a grievous contumely. They fancy, at length, that they find in some casual occurrence glaring proofs of premeditated designs to ruin them, and expose them to the contempt and derision of society. The disease in these cases has its real commencement long before the period when the particular illusion, which is only an accessory symptom, is discovered, and even before it became impressed on the imagination; but it is not until that impression has taken place that the case assumes the proper character of monomania." 29.

We think it probable that Dr. Prichard is correct in this statement. The monomaniac is *so* rational on all other points but that of his own peculiar illusion, that any little eccentricity or deviation from the normal state of reason is not perceptible, unless the history of the case is correctly known, and the conduct of the individual minutely scrutinized.

Among the varieties of monomania, the worst instances are those in which the thoughts are directed towards the evils of a future life. The unseen state opens the most ample scope for dark and gloomy anticipations, and is selected by the desponding monomaniac as a field for the exercise of his self-torturing imagination. Two centuries ago, persons were every where found who fancied themselves possessed by devils, as the ancients were pursued and agitated by furies. Jacobi informs us that this is still a prominent form of monomania in some Catholic countries. The fear of disease or hypochondriasis, is only a primary stage of monomania.

In a third section, Dr. P. illustrates moral insanity and monomania by the detail of specific cases. These of course we must pass over. They are collected from various sources, as well as from personal observation, and they are sufficiently illustrative of the species of insanity intended to be delineated.

SECTION IV. treats of mania, or raging madness. This is distinguished, without difficulty, from the preceding forms of the disease.

> "This form of madness generally makes its appearance and reaches its highest pitch more rapidly than others, and it is termed accordingly, when that is the case in a marked degree, *acute mania.* There are, however, in most instances premonitory symptoms, lasting for some days or even for some weeks, before the existence of mania becomes fully established. During this period the individual experiences occasional fits of excitement and confusion, by which his understanding is disturbed. He passes some days in a a state of feverish agitation and general uneasiness: he is full of activity, and displays a morbid energy in the pursuits on which he is intent, in which, however, he performs nothing; his projects are for the most part trifling and absurd. He neglects food, loses his appetite, passes sleepless nights, either lying awake and fatiguing his mind with anxious speculations, or rising often, walking to and fro in a state of uneasiness and perturbation. At length his reason is found to be disordered; he appears scarcely to know what he says, talks nonsense, repeats his words frequently, is unable to complete the sentences which he begins, and makes ineffectual efforts to recollect his thoughts, utters rapid and confused expressions in an impetuous manner; cries, laughs, appears irritable and prone to anger, though, perhaps, naturally of mild and sedate temper; is impatient of the most trifling opposition, and absurdly obstinate and capricious; expresses his feelings with an unreasonable degree of warmth and enthusiasm. It is often remarked by their relatives and others, who have an opportunity of observing the conduct of individuals thus affected, that the state of their minds resembles that of persons intoxicated, and that their attempts to collect their thoughts and express themselves with correctness are like the efforts of men half drunk to continue conversation and prove themselves to be sober. The morbid state of a person under these circumstances is always apparent to those who surround him; but it is sometimes doubted whether he is completely mad and a proper subject for restraint, until some attempt being made to oppose him and interfere with his wild pursuits, he breaks out into a degree of violence which obviously requires coercion, and sometimes, though this is not a constant phenomenon in mania, shews that he has laboured under the influence of an unperceived delusion, an insane and absurd impression as to his own person, or his relation to others. Such an impression, if it exists, is not found to be a permanent delusion, like that of the monomaniac; it is soon forgotten, or gives way to some other phantasm.
>
> The disease generally increases in violence, and is several days, or perhaps weeks, before it reaches its highest degree of intensity. During this period the phenomena of derangement vary according to the predominance of particular feelings. In some fear, in others anger, in all some violent emotion has the sway. Many individuals are seized occasionally with painful agitations, with fits of terror; they are under apprehension of some undefined evils impending over them; they pass sleepless nights, and cannot even lie in their beds; and by day they are in a constant state of uneasiness and restless action. Others break out frequently into the most violent expressions of rage and enmity against their relations, who are under the necessity of exercising more or less of restraint and resistance to their absurd proceedings, and have, perhaps, threatened to put them into confinement, or have even carried the proposal into effect. They utter imprecations against those persons who have deprived them of their liberty, declare that they will obtain vengeance, and bring them to condign punishment. The nearest relatives and the most affectionate friends of the lunatic are now among the objects of his most vehement displeasure. As the disorder approaches its highest pitch, the current of ideas becomes more and more turbid; the thoughts and feelings are expressed with cries and ejaculations, with agitation displayed in the manners and countenance, with

> violent and irregular movements and gestures; the internal sentiments or feelings so absorb the attention that the patient becomes almost unconscious of external impressions. Many individuals abandon in their own persons all regard to cleanliness and decency, and become filthy and disgusting in the extreme. All the functions of the body are in these circumstances of the disease affected; the bowels are irregular, the tongue is furred, the skin cold and clammy. The patient excreates saliva mixed with mucus. His features become haggard and maniacal; his eyes watery and suffused. In some instances the countenance of the individual is so much altered in expression, that his nearest relatives would scarcely recognise him." 74.

Dr. Prichard is not content with this graphic description, but he introduces others from Pinel, Chiaruggi, &c. which only swell the work, without adding to its value.

SECTION 5, treats of the phenomena attendant on the chronic or protracted stage of the disease. The ultimate tendency, he observes, of insanity is to pass into a state of mental decay, or obliteration of the intellectual faculties, afterwards to be described under the head of DEMENTIA. Before this mournful climax of human woe is attained, there is generally an intermediate stage of uncertain duration—which may be termed the chronic period of insanity. This is the state in which most inmates of lunatic asylums are found. It sometimes lasts for many years, or for life.

> "The memory, the judgment, the powers of attention and of combination are so much impaired, that the individual is wholly inadequate to the duties of society, and incapable of any continued conversation; his actions and conduct are without steadiness and consistency; his thoughts are deficient in concentration and coherence. In fact this may be considered as a prelude or commencement of that state of incoherence or dementation which will be described in the sequel. It is a combination of the phenomena of mania or monomania with those of dementia." 79.

SECTION 6. *Incoherence or Dementia.*—This is a peculiar and well-marked form of the malady. The mind is occupied, without ceasing, by unconnected thoughts and evanescent emotions—is incapable of continued attention and reflection, and, at length, loses the faculty of distinct perception or apprehension.

> "Incoherence is either a primary disease, arising immediately from the agency of exciting causes on a constitution previously healthy, or it is a secondary affection, the result of other disorders of the brain and nervous system, which, by their long duration or severity, give rise to disease in the structure of those organs. The causes which produce the state of incoherence as an original disorder are nearly the same with those which in other cases excite madness in the first instance; they are such agents as break down the powers of the mind by their overwhelming influence, or destroy them by vehement emotions. Secondary incoherence or dementia follows long-protracted mania, attacks of apoplexy, epilepsy or paralysis, or fevers attended with severe delirium. This decay of the faculties has been termed fatuity or imbecility, and it has been confounded with idiotism, which in all its degrees and modifications is a very different state. The distinction, which is very important, has not always been kept in view by writers on disorders of the mind, and even in the works of Pinel we find it sometimes overlooked. M. Esquirol has the merit of having drawn more accurately the line of discrimination. He refers to dementia all the cases of effete or obliterated intellect which are the results of maniacal or other diseases, and are incident to persons originally possessed of sound faculties, and includes those defects only under idiotism, which are original or congenital. 'The imbecile,' he observes, 'have never possessed the faculties of the understanding in a state sufficiently developed for the display of reason. The victim of dementia was once endowed with them, but has lost this possession." 86.

A variety of disorders are occasionally complicated with insanity; but paralysis is so frequently found in connexion with the disease, that Dr. P. dedicates the seventh section of this Chapter to the subject. Often in the advanced stages of insanity a peculiar modification of paralysis presents itself—especially when the cases are passing into the state of dementia. M. Esquirol first drew the attention of the profession to this state, and pointed out its incurability. "It has a peculiar course, says he, ever increasing as the powers of the mind diminish." Whenever this appears, the insanity soon afterwards passes into dementia. It is more frequent in males than in females—in one establishment, the proportions were 95 out of 109—in another, 95 to 14. Three degrees of this paralysis are drawn by M. Calmeil, and copied by Dr. Prichard. We shall introduce the first and third degrees.

"*First Degree.*—An impediment in the movements of the tongue is the first indication of this form of paralysis, and it has often become already very apparent while no embarrassment is as yet discovered in the movements of the limbs. The articulation is no longer perfect, the patient is obliged to use effort in speaking, his words are uttered tardily and with a sort of mumbling and stammering like that of persons intoxicated. If the patient is desired to put out his tongue, he does it without any discoverable deviation; the muscles of the mouth and face preserve their natural position; nothing unusual can be perceived except a kind of muffled articulation, which might excape remark from a person not directing attention to the circumstance." 103.

"*Third Degree.*—Nothing is more deplorable than the aspect of a lunatic affected with general paralysis in the third degree. Those injuries of the brain which affect the intellect and the powers of movement, now approach the very last point. These patients, motionless and insensible, are reduced to a state of mere vegetation; their existence is a kind of slow death. Some individuals are not able to articulate a single word, and only utter vague and confused sounds. The lower extremities are so weak that standing is impossible. A period arrives when even, in sitting, the individual can no longer raise or extend his legs; the hands and arms have not lost so entirely their power of action, but it is evident that they participate in the general weakness. Often there remains no trace of intelligence; food must be put into the patient's mouth; he is totally insensible to excretions, and pays no attention to surrounding objects, and is almost destitute of impressions. He hears indeed, sees, tastes, and perceives strong odours; but is scarcely affected by any sensation.

Digestion, which at first was strong, is at length lost with the other physical powers; the body becomes more and more emaciated; at length the skin sloughs. The lateral parts of the back, the lumbar regions, the cellular tissue which covers the coccyx, the sacrum, the sciatic tuberosities, become the seat of suppuration. Œdema takes place in the depending parts; hectic fever accelerates the exhaustion of physical life." 104.

SECTION IX. treats of disorders of the physical functions in insanity. He properly observes that other functions besides those of the brain are often deranged—perhaps *always* more or less so, in mania. The secretions, excretions, digestive functions, &c. are frequently disordered. Pinel and others have considered the primary seat of mental alienation to be in the stomach and intestines, from which centre the disease radiated to the organ and functions of the mind. Others, again, have viewed these abdominal disorders as secondary, or consequent on the cerebral affection. There can be little doubt, we think, that the primary cause of insanity commences sometimes in one of these two centres, sometimes in the other. One thing is certain, that they frequently, if they do not generally coexist.

CHAP. III.—*On the terminations of insanity*, must conclude our first article of review. The duration of the disease is too various to admit of any calculation—lasting from a few days to many years—so many as to forty or fifty! The proportion of recoveries depends upon various circumstances—attendant on insanity—its simplicity or complication—the character of the alienation—the length of time elapsed—the age, sex, and constitution—and finally, the nature of the causes which have produced the malady. All these items are discussed seriatim, and with considerable minuteness. We can take but a rapid glance at the different sections of this chapter. Where insanity is complicated with disease of the brain, the chances of recovery will evidently be diminished. General paralysis is the worst of all complications. Epilepsy is little less unfavourable to recovery. Mania is more frequently cured than monomania, and the latter is not near so obstinate as dementia. The previous duration is of great consequence in forming the estimate. Dr. Willis affirmed that nine lunatics out of ten recovered, if placed under his care within the first three months. Dr. Burrows, Dr. Finch, Mr. Tuke and others have made nearly similar observations. The most favourable age (according to Esquirol) for recovery, is between the 20th and 30th year. Few are cured after the age of fifty. In respect to sex, many writers consider insanity more curable in women than in men. The summer, too, is more favourable to recovery than other seasons of the year. The term of life in females, is sometimes productive of recovery. It appears that the number of cures effected in the English lunatic asylums is greater than on the Continent. We confess that this does not excite any great wonder in our minds, for many of the continental institutions are a disgrace to the age. There are many exceptions, however, but those who have examined the asylums of Europe will, we apprehend, agree with us in the foregoing remark. It is curious that Bethlem, till very recently, was greatly behind other institutions, in the proportion of cures, notwithstanding the rigid principles of *selection* enforced in that asylum. It has lately improved in this respect.

The RETREAT at York, under Mr. TUKE, exhibits a very favourable feature—and we may add, from personal observation, that there is a small but beautiful RETREAT, near Hackney, under the superintendance of a TUKE, also, where *comfort* is certain, and *recovery* rendered extremely probable.

Dr. P. does not think that insanity "is to be reckoned among the diseases which are very dangerous to life." The state of the brain, though incompatible with sound functions of the mind, is yet, he remarks, compatible with healthy functions of the body. We are a little sceptical on this point. Dr. P. himself came to the conclusion that insanity was almost invariably attended by disordered functions, not only in the head, but in the abdominal or glandular organs. These disordered functions, as in cases where there is no insanity, may be compatible with long life—but we question whether the life would not have been still longer if no insanity, and no corporeal function had existed. The number of cases in lunatic establishments, where patients had been lodged there for 30, 40, or even 50 years, cannot satisfy us that insanity curtails life.

"The morbid state of the brain, is, however, liable to increase beyond the limit above adverted to, and then the usual phenomena dependent on severe cerebral disease are manifested. It is well known that lunatics are subject in a much greater proportion than other persons to apoplexy, paralysis, convulsions, and all the trains of symptoms depending on different degrees or modifications of cerebral congestion." 147.

This is sufficient to determine a question which is often agitated in life assurance offices, as to the propriety of insuring insane people, apparently in bodily health, at the usual premiums. We have always set our faces against this proposition, as contrary to sound pathological science. Besides the above consideration, many maniacs die exhausted from the ceaseless excitation of their feelings, and the constant agitation of mind and body which they undergo, added to which is the want of sleep which they so frequently experience. Diseases of the heart, lungs, and abdominal viscera are too often complicated with insanity, to be merely accidental accompaniments.

"In protracted cases death either results from increase in the disease of the brain, which disease up to a certain degree had only interfered with the operations subservient to the mental faculties, but at length becomes incompatible with the merely physical functions of the same organ; or it is the result of accidental disorders, which, owing to the peculiar state of the brain and other organs in lunatics, are more than usually fatal to them." 149.

This brings us to the end of the third chapter, and to a natural division in the series of investigations, where we may pause till next quarter, without any inconvenience to our readers. We could not do justice to Dr. Prichard's labours in one article, unless carried beyond all ordinary bounds; but we hope, in our next number to complete the analysis, to the satisfaction of the author and the professional public in general.

# Periscope;

OR,

# CIRCUMSPECTIVE REVIEW.

"Ore trahit quodcunque potest, atque addit acervo."

## I.

## SPIRIT OF THE ENGLISH PERIODICALS, AND NOTICES OF ENGLISH MEDICAL LITERATURE.

### Extraordinary Case of Tetano-Epileptic Convulsions.

A case of this kind lately occurred in practice, which exceeded in melancholy interest any thing ever witnessed by ourselves, during a very long course of observation and experience—and we believe we can say the same on the part of several other physicians and surgeons who were in professional attendance—among whom were Sir A. Cooper, Dr. Bright, Dr. Farre, Dr. Watson, Mr. Macintyre, Mr. Chisholme, and others.

The patient was a gentleman of large fortune, aged about 52 years, though apparently much older; but who had been remarkably active and strong till within the two or three last years of his life. At that time he fell from his horse, while at some distance from his mansion in Wales, in a kind of fit, the exact nature of which could not be ascertained, as it was over before medical attendance could he procured. It was considered to be epileptic, because he had subsequently several attacks of the epileptiform character. In the latter part of November last, Dr. Johnson was called into attendance on this gentleman, in consequence of a bronchitic affection under which he was labouring, and a very obstinate constipation of the bowels. The bronchitis was not very acute, and was readily relieved by the usual means. The bowels were also brought into a more manageable state by proper aperients, and the patient was so well as to go out in his carriage, and Dr. J. only called occasionally to see him. It was during this period that Dr. J. learnt some particulars of the epileptic seizures which had previously occurred. The patient, though not a man of much intellectual power, did not appear to have had his sensorial energies in the least degree impaired by the epileptic paroxysms.

On Friday night (26th Dec.) the patient, after some anxiety and want of sleep, occasioned by a domestic event, not of a mournful nature, was seized with a violent fit, or rather series of fits, which lasted several hours. They were evidently of the epileptic kind—and were followed by a semi-apoplectic sopor, such as often succeeds the epileptic convulsion. When the stupor subsided, the patient was perfectly sensible, and merely complained of soreness in the muscles, but no head-ache, except when he coughed. His bowels were opened by medicine, and it was hoped that the paroxysm would not return. In this hope we were grievously disappointed. It was only the first of a series of paroxysms that attacked this unfortunate gentleman, with more or less violence, and with longer or shorter intervals, from the 26th December till the second day of January, when death put an end to the most dreadful sufferings which patient ever endured, or physician witnessed in this world!

Although the paroxysms varied considerably, in respect to intensity, duration, and intervals; yet they were so identical in kind, that the description of one may serve for all. The premonition was a quivering sensation in the muscles of the lower extremities, which caused the patient to cry out—"the spasms are coming on—hold me, hold me!" He then groaned loudly, till the spasms took away all power of speech. The face was drawn violently towards the *left* side, as were the eyes. The left arm was bent, and drawn across the chest, the fist being clenched. The left leg and thigh were drawn upwards, and bent across the other leg and thigh. Thus the flexors and abductors of the left extremities overcame the extensors and abductors; but not by one uniform convulsive contraction, as in tetanus, but by a series of the most rapid and painful vibrations. These vibrations could not be counted; but they were perfectly cognizable by the eye and the touch. The muscles of the other side of the body, and of the limbs, underwent similar convulsive vibrations, but were not rigidly contracted at the same time, as on the left side. Thus the abdomidal muscles could be seen and felt in this convulsive and vibratory state, and it was evident, from the respiration and the voice (when the latter was audible,) that the diphragm suffered in common with the muscles of voluntary motion. There never was well-marked opisthotonos or embrosthotonos, though the muscles on the front of the body were more convulsed and contracted than those on the back, with the exception of the large muscles about the back of the neck, which generally drew the head backwards, while the face and eyes were drawn to the left. After all the severe paroxysms, the left arm remained, for a time, completely paralytic. If the interval was of some duration, it regained sense and motion in a considerable degree.

The paroxysms were very various in duration—lasting from one minnte to fifteen or twenty. They differed much in intensity; since the patient, in some attacks, retained his consciousness, and in others he was totally insensible, and remained so for many minutes after the paroxysm was over. Whenever the consciousness did return, whether immediately on the cessation of the spasms, or after a short lapse of time, the intellectual functions were as clear as at any period of the patient's life. The intervals were also very various as to duration. Sometimes they extended to several hours—at other times, they actually ran into one another—one paroxysm having scarcely ceased, when another commenced. In every attack, the pulse rapidly increased in frequency, and became smaller in calibre. In the severe paroxysms, it was almost imperceptible, and quite innumerable. After the paroxysm, it gradually became developed, full and strong.

In all the severe paroxysms, the breathing became dreadfully laborious, quick, and wheezing. Many times we expected that the patient would expire, from the collection of mucus in the trachea and bronchia, and from the inadequate supply of air to the lungs. These attacks continued day and night, with longer and shorter intervals, till the 29th of December, when, after a series of frightful paroxysms, the patient fell, apparently, into the "agonies of death," or rather into that state of insensibility which precedes dissolution. The breathing was laborious and stertorous—dead rattles in the throat—eyes open and inanimate—total paralysis of the whole body—mouth wide open—evacuations passed involuntarily—skin cold and clammy—in short, he appeared *in articulo mortis*, from which not one of his medical attendants conceived a possibility of emergence. Several of them waited, hour after hour, to see the final close. This state lasted six hours and upwards. In the course of this period, we occasionally perceived a slight tremor or quivering in the tendons of the wrist, during which, as in the severe paroxysm, the pulse became nearly extinct, the breathing short, broken, and hardly perceptible, and life itself in the act of vanishing! Strange to say, from this low ebb he rather suddenly emerged—spoke, took nourishment—and became considerably better than he had been at any period during the two preceding days. Sanguine hopes were entertained of his recovery during the 30th and 31st days of December—there being often a considerable interval between the paroxysms, during which he was cheerful and full of hopes himself!

. It was after this miraculous resuscitation that we observed a phenomenon not before presented, and which did not afterwards recur. In two successive paroxysms, the face and eyes were drawn violently to the *right* side, the spasms in the extremities and trunk continuing nearly the same as usual.

The constitution, which had hitherto borne up wonderfully against such unparalleled tortures, now evidently began to give way. The features became shrunk, and expressive of unutterable suffering; and he expressed a conviction—almost a wish, that the Almighty would release him from his agonies, one way or other! The paroxysms continued, but neither so violent nor so protracted as at an earlier period of the disease:—He got some sleep in the night of the second of January, and expired towards the morning.

We have not interrupted the narrative of this terrible malady, by an enumeration of the remedies employed—for, candidly speaking, we very much doubt whether the disease was, in any material degree, even mitigated by the various means that were tried in this deplorable case. When the list of medical attendants is referred to, it will hardly be doubted that every remedy which talent or experience could suggest was fairly employed. Cupping, leeching, blistering, purging — and, lastly, *mercurialization*, were tried—and all failed. The dissection will well excuse the want of success in therapeutic agents. One feature was prominent throughout—the extreme vitiation of the fæcal evacuations. They continued of the most depraved kind till the last —or till there was nothing more than mere watery secretion to come away. Opium was not extensively employed, on account of a most decided antipathy which the patient entertained against the medicine. In early life this gentleman had studied physic, and he was able to detect at once the smallest quantity of opium, when exhibited, by its effects on his bodily and mental functions. It is very doubtful, however, if the extensive exhibition of opium, in any shape, would have been productive of any material benefit. The only remedies which seemed to promise any mitigation of the symptoms were purgatives and mercury. The former generally diminished, for a short time, the frequency and violence of the spasms;—The latter (calomel in two or three-grain doses every two or three hours) promised at one time, a relief that engendered hopes of a happy result; but alas! these hopes were delusive, and every remedy failed in the end. The calomel could not be got to affect the mouth—and ultimately so irritated the bowels, that opiates became indispensable.

### DISSECTION.

It was with the greatest difficulty we got permission to examine the head. Sir Astley Cooper, Dr. Bright, Dr. Watson, Dr. Johnson, Mr. Macintyre, Mr. Balderson, and Mr. H. J. Johnson were present. The cranium was remarkably thick, especially about the os frontis, where the diploe was obliterated. The membranes covering the fore and upper part of the right hemisphere were thickened, and strongly adherent to the subjacent brain. In the falciform process, deep between the anterior lobes of the brain, and near the inferior longitudinal sinus, was found a rough and jagged bone, an inch and a quarter in length, by about half an inch in breadth, well calculated to irritate, both hemispheres. In the middle of the anterior lobe of the *right* hemisphere, near its upper surface, was found a portion of brain, larger than a walnut, reduced to the consistence of a yellowish fluid, contained in a cavity lined by a polished surface, but not exhibiting the organization of a membrane, or cyst. Surrounding this cavity and its liquid contents, the medullary substance of the brain was preternaturally hard and firm, like an indurated circle, contrasting remarkably with the brain in general. The substance of the brain, immediately under the thickened and adherent membranes, was in a state of *ramollissement.* There was considerable vascularity about the base of the brain and pons varolii, but no other morbid appearance deserving of notice.

Many circumstances, which cannot be mentioned here, combined to render this case exceedingly interesting—and not the least of these was the horrible torture experienced by the patient himself, once one of the faculty, and nearly connected with some of the first medical characters in this or in any other country. We here see an organic lesion, or rather lesions, of the brain, which must have been of several years' standing, and yet producing functional disturbance only occasionally—and often at long intervals—the health, in such intervals, being apparently good—at all events, without any impaired state of the cerebral functions. It may be a question, what part the bony deposit in the falx took in the chain of causation. We are of opinion that, in conjunction with the great thickness of the cranium, this irritating body, placed deep between the two hemispheres of the brain, must have conduced largely to the epileptic attacks with which the patient was troubled for some years previous to his last illness. The diffluent portion of brain, in the anterior lobe of the right hemisphere, must have been of some standing; but we are inclined to think that it was rather an effect than a cause of the epileptic seizures—at all events, that it took place *posterior* to the early attacks, and, consequently, could not be considered in the light of *their* cause. But that it was mainly instrumental in the fatal catastrophe we have little doubt. The convulsions were always greater in the left than in the right side—while the face, excepting in two paroxysms, was constantly drawn to the opposite side in the fits. The most inexplicable part is the circumstance of the paralysis, which generally succeeded the violent spasms of the *left* arm, but without any such event in the left side of the face. Why was the face drawn twice to the *right* side—and all the rest of the times to the opposite side? This is a puzzler? Could the bony deposite in the falx, situated *between* the two hemispheres, account for this phenomenon? Circumstances might possibly arise, in the course of the disease, that might cause the irritation to be more directed towards one hemisphere than towards another, at different periods. It is remarkable that, with such lesions, health should be but slightly impaired—and the mental functions not at all—the day before the fatal attack commenced! The disordered condition of the bowels was the only ostensible cause why the disease was called into such destructive activity. This gentleman had strong prejudices—we might say antipathies, especially against calomel, and every preparation of opium. He had also the strongest objections to many other medicines—circumstances that crippled his medical attendants in the first few days of the malady, and probably proved detrimental to the patient himself. Considering that the organic changes must have existed for a long time, it is by no means improbable that, if the digestive functions had been restored to a healthy state during the first two or three days of the spasms, the termination might have been otherwise than it was—and that a temporary respite might have been obtained.

### ACUTE NEPHRITIS.

The following case is quoted by Dr. Ryan from a thesis on "Acute Nephritis," supported by M. Lemoine, of Paris. As we have not seen the thesis, we shall copy the case, being short, from our contemporary.

"N., aged 50 years, of phletoric constitution, had for two years passed very fine gravel with his urine, accompanied with considerable pain; the urine was reddish, the stream bifurcated, though he asserted that he had never had gonorrhœa. During the last year he has passed no gravel, but the emission of urine has been exceedingly difficult and much more painful. For some time the desire to pass water has been very frequent; the stream would suddenly stop, then go on again, and so repeatedly: the pain was excruciating. On entering the hospital calculus was suspected, and a sound was introduced; nothing was found. A few days after, the emission of urine having become next to impossible, an useless attempt was made to introduce a catheter: Ducamp's sound was then used, and a constriction five inches down the passage was found. Subsequently vain endeavours were repeatedly made to introduce bougies. On the 16th, however, they contrived to fix a bougie, which entered the bladder with the utmost ease, and without causing the slightest pain: it remained in all day. On the 17th, the patient had rigors on coming out of the bath: shortly after he was seized with colics; diarrhœa came on, and pains were felt in the penis (demulcents and anodynes). The 19th: in the same state: thirst great: urine was passed 8 or 10 times in the day, and 10 or a dozen times in the night: during the emission, and for a long time after, the urethra and rectum were acutely painful: the pulse tranquil: tongue moist: no sleep. The 20th: an acute, darting pain was felt in the right lumbar region: the belly is somewhat swelled and painful to the touch: constipation: vomiting of bilious matter; yellow tongue: intense thirst: great head-ache: small and rapid pulse (leeches on the pained part, hip-bath, demulcent drinks). From the 20th to the 24th the state of the patient was not improved: the treatment was continued. On the 24th an ounce of castor oil was given. The 25th: the pulse is steady, the vomitings had not ceased: the pain is agonizing; the belly is slightly swelled and numb in the iliac region and the whole of the left side: the face much swelled (sinapisms). Died at noon.

*Dissection.* .The right kidney is surrounded with thick pus infiltrated into the surrounding cellular tissue. It is considerably larger than the left kidney, and more red: both its surfaces are spotted with white or suppurated points of the renal tissue: one on the convex edge is larger than the others. Between these purulent points, the tissue of the kidney is of a natural colour. Around these on the posterior surface there is, however, a dark, red ring: the purulent points are spongy and easily torn or broken.

Within the kidney, the membranes of the pelvis and ureter to an inch from the kidney are thickened and covered with small points, some pink, others dark red or blackish: under the latter, the mucus was particularly thickened. In all the divisions of the calices the mucus is of a dark red. All the papillæ are inflamed and exceedingly red: they are soft and easily broken by pressure with the finger. Some of them are ulcerated at the point; others are completely disorganized and pulpy. The suppuration extends along the tubular fasciculi to the external diseased points. In some papillæ the disorganization only extends to the cortical substance; in others innumerable points of ulceration are observed. The cortical substance is partly sound and whitish.

The bladder is reduced to a remarkably small size, and contracted behind the pubis; its parietes are thickened to more than half an inch. The urethra is very red, and covered with small and numerous vessels gorged with blood. The muscles of the perineum are strongly developed."*

We can hardly fail to remark the inert practice which led to the fatal catastrophe in the above case. Little doubt can be ascertained, that nephritic inflammation was preying on this poor man during the whole time that was lost in catheterism, warm bathing, and the "médecine expectante." Had he been copiously bled and cupped, or leeched, often and long before the warm baths were employed, he might have had some chance of life. As it was, he had no more hope of recovery than a man thrown into the sea, with a best-bower anchor made fast to his body!

---

* Dr. Ryan's Journal, No. 153.

### Pathology of the Urine. By Dr. Bostock.

There is a neat exposé of this subject in a late number of the Cyclopædia, the pith of which we shall give in the following extract. Previously to touching on the morbid states of the urine, Dr. B. gives the analysis of healthy urine by Dr. Henry and also by Berzelius. They differ in some respects—but not very essentially.

| | " *Henry.* | *Berzelius.* |
|---|---|---|
| 1. | Water. | Water. |
| 2. | Free phosphoric acid. | |
| 3. | Phosphate of lime. | Phosphate of lime. |
| 4. | Phosphate of magnesia. | Phosphate of magnesia. |
| 5. | Fluoric acid. | |
| 6. | Uric acid. | Uric acid. |
| 7. | Benzoic acid. | |
| 8. | Lactic (impure acetic) acid. | Free lactic acid. |
| 9. | Urea. | Urea. |
| 10. | Gelatine. | |
| 11. | Albumen. | |
| 12. | Lactate (acetate) of ammonia. | Lactate of ammonia. |
| 13. | Sulphate of potash. | Sulphate of potash. |
| 14. | Sulphate of soda. | Sulphate of soda. |
| 15. | Fluate of lime. | |
| 16. | Muriate of soda. | Chloruret of soda. |
| 17. | Muriate of ammonia. | Chloruret of ammonia. |
| 18. | Phosphate of soda. | Phosphate of soda. |
| 19. | Phosphate of ammonia. | Biphosphate of ammonia. |
| 20. | Sulphur. | |
| 21. | Silicia. | Silex. |
| | | Extract of meat soluble in alcohol. |
| | | Extractive matters soluble only in water. |
| | | Mucus of the bladder." |

The morbid states of the urine are divided into six kinds—and as the subject is handled in a masterly manner, and the language cannot be condensed without injury, we shall make room for a long extract, in order not to break the continuity of the pathology.

1. *Aqueous Urine.*—This may be characterized as a state of the secretion, where the proportion of the fluid to the solid contents is morbidly increased, and which is frequently, although not necessarily, attended by an increased quantity of the urine that is discharged. And here we must be careful not to confound those incidental or temporary changes in the state of the fluid, such as are produced by the application of cold to the surface of the body, or by certain mental emotions, with the watery urine, which proceeds from a permanent or constitutional cause. Among the causes of this description, perhaps the most frequent and the most efficient is that state of the system which has been denominated the nervous temperament, and more especially the peculiar modification of it which gives rise to the hysteric paroxysm. Here we have an unusually large quantity of urine discharged, and this often containing less than the ordinary proportion of solid matter, and as far as has been ascertained, without any other essential change in the nature or proportion of its constituents. The aqueous urine will be often found to exist in that state of the system, where, without any specific disease, the powers both of the mind and the body begin to decline, and when the gradual decay of all the organs indicates the approach of old age.* Here the functions of the kidney are among the first to feel the effects of that decay, which gradually undermines every part of the system, and which terminates in its dissolution. We are not aware of any specific cause

---

* "The late Dr. Heberden, in his invaluable volume, enumerates the frequent passing of urine among the symptoms of what he styles Valetudo Conquassata: Comment. chap. 94; in this state we believe the urine will be found to be much increased in quantity, and to be aqueous."

of this particular condition of the urine, independently of the general irritability and debility of the system; nor do we know that it leads to any specific indication either of prognosis or of treatment. We believe, however, that it is an actual and not a very unfrequent occurrence, and that it is one to which the attention of the practitioner may be advantageously directed, as it may assist him in forming an opinion respecting the general state of the vital energies of the system, and of the degree in which the organs of digestion and assimilation are capable of performing their functions.

2. *Sub-aqueous urine.* This, in its specific character and its appellation, may be considered as directly the reverse of the former state, and yet, in its pathological cause, is somewhat closely connected with it. In certain cases of increased discharge of urine, it will be found, that besides an augmentation in the quantity of the secretion, it contains even more than the ordinary proportion of solid contents, and thus, both from its quantity and its quality, carries off from the system an unusually large proportion of the ingredients, which ought to be applied to its growth or support. The sub-aqueous urine is sometimes found to exist in the decline of life, and would appear to be one cause among others by which a premature state of decay is effected. But it more frequently occurs at an earlier period in constitutions that have been debilitated by various causes, and particularly by excesses of all kinds; by long-continued violent exercise, by stimulating diet, and especially by large potations of wine and fermented liquors, and, perhaps, more than any other cause, by excessive sexual indulgence. This state of the urine is occasionally met with in persons whose constitutions have been injured by a residence in tropical climates.

The sub-aqueous urine is often found to be connected with the albuminous, or to alternate with it; and it would appear to be, to a certain extent, the result of the same causes acting upon a different constitution, and exhibiting themselves in a more chronic form, consequently with less of febrile action and without the specific derangement of any particular organ. To this species we are disposed to refer the variety of diabetes which has been termed *insipidus*, where we have an increased flow of urine, of high specific gravity, with the constitutional symptoms of the disease, both as to the state of the digestive organs and the skin, but where the urine does not contain any saccharine matter.* We believe it will be found upon examination that the sub-aqueous state of the urine is not unfrequently a precursor of its saccharine state, and that, in some cases, which may be correctly styled diabetes, the disease never proceeds beyond this stage, in consequence of some change being effected in the constitution, either by natural causes or by the operation of remedies.

3. *Lithic urine.*—This is characterised by the spontaneous deposition of lithic acid, constituting the principal part of what is generally termed the sand or gravel of urine. The immediate cause of this deposition is the presence either of some other acid in the urine, which may precipitate the lithic acid naturally contained in it, or merely an increased quantity of the lithic acid itself, or rather the super-lithate of ammonia, so as to be more than can be held in solution in the urine, especially when it is reduced in temperature, after being discharged from the bladder. It appears that this latter, which is the simplest form of the disease, is also the most frequent, and in fact that there are few individuals in whom it does not occa-

---

* "The writer of this article presented a case of this description to the Medico-Chirurgical Society, where the urine contained no saccharine matter, but where its specific gravity was 1034 while the quantity discharged daily amounted to five quarts. By an analysis of the urine it appeared that the patient was discharging daily seven and a half ounces of urea, which may be considered as at least three times the natural quantity. Med. Chir. Trans. vol. iii. p. 107 and seq."

sionally exist;* we find, indeed, that any cause which deranges the digestive process, or interferes with its due action, may produce the deposit of lithic acid. Among the most frequent of these causes we may enumerate an excessive quantity of food taken into the stomach, food of an indigestible nature, exercise taken immediately after a full meal, the application of cold to the surface of the body or to the feet during digestion, and an undue quantity of liquid taken into the stomach.

In the most simple form of the disease there is a deposit from the urine, as it cools, of a brown sediment, which is either pulverulent, or consisting of a mixture of the powder with minute crystalline spiculæ. When this deposit, as is frequently the case, assumes a pink or purple colour, it depends upon a combination of the purpuric with the lithic state of the urine. In the less simple form of the disease there would appear to be an additional agent in the urine, besides the superabundant lithic acid, which produces the deposit in question. Dr. Prout supposes that the precipitation may be effected by various acids, but most generally by the phosphoric, and occasionally by the sulphuric, the nitric, or the carbonic, as well as by some other acids which are the peculiar product of the renal secretion.† In this case the lithic acid is precipitated in more or less of a crystalline state, and forms the greatest part of what has been termed urinary gravel. This gravel, like the sand in the former variety, may be tinged of a pink or purple colour, depending, in like manner, upon the combination of the purpuric with the lithic urine.‡

With respect to the pathology of the lithic urine, it may be generally considered as a symptom of an imperfect state of the digestive organs, either induced, in each individual case, by a specific cause acting upon the stomach and the chylopoietic viscera, or by a peculiar condition of the constitution, more especially by the gouty diathesis.§ It is this state of the urine which lays the foundation for a large proportion of the calculi which are occasionally formed in the bladder, or other parts of the urinary organs. We find, by chemical analysis, that the most frequent species of these concretions consist essentially of lithic acid, and that in many others, where the bulk of the calculus is composed of the phosphates, the nucleus consists of lithic acid.‖ (See CALCULUS.)

---

[*] Prout's Inquiry, p. 121.

[†] Inquiry, p. 128.

[‡] "For a very complete account of this variety of the urine, and of the state of the system which produces it, the reader is referred to the valuable treatise of Dr. Philip, first published separately in the year 1792, and afterwards in an altered form, in the sixth volume of the Transactions of the College of Physicians, and to the third chapter of the second section of Dr. Prout's Inquiry. Both these writers refer to a work, published nearly half a century ago by Forbes, which appears to possess very considerable merit, when we consider the imperfect state of chemical science at that period."

[§] "We are indebted to Wallaston for the discovery of the chemical nature of the gouty concretions which had been previously termed chalk-stones, as consisting of the lithate of soda. Phil. Trans. for 1797, p. 389. These bodies had been previously examined by Berthollet; but it appears that this eminent chemist, who on most occasions is so remarkable for his accuracy, in this instance proceeded rather upon theory than actual experiment. He supposed that the urine of gouty patients was deficient in phosphoric acid, and that the acid was deposited in the joints in combination with lime. Journ. Phys. t, xxviii. p. 275. In connexion with the subject of gouty urine we may refer to the work of Sir C. Scuddamore, who performed a series of experiments on this subject."

[‖] "*Fourcroy and Vauquelin*, Ann. Chim. t. xxxii. p. 217; Philip, Trans. Coll, Phys. v. vi. p. 176; *Pearson*, in Phil. Trans. for 1798, p. 38; *Marcet*,

4. *Phosphatic urine.*—This, when considered in its chemical relations, may be regarded as the opposite state to the lithic, consisting essentially in an excess of the phosphoric salts, and especially of the phosphates of lime and of magnesia, with a comparative deficiency of the lithic acid. Hence it is characterised by the deposition of the phosphates in the form of a sediment, which is generally white, and of an earthy or chalky appearance, although occasionally assuming the crystalline state.—The chemical constitution of the phosphatic urine appears to differ considerably in different cases, all of which, however, agree in the characteristic circumstance of the excess of the phosphoric salts. Sometimes there is a deficiency of the urine in proportion to the saline ingredients, and at other times there is an absolute deficiency of both the urea and the salts, reducing the urine to the aqueous state, but still maintaining the relative excess of the phosphates.

The pathological condition of the system which produces the phosphatic urine is less easily characterized than the lithic, as it would appear that a variety of circumstances, which have no very obvious connexion with each other, both of a constitutional and a local nature, agree in producing this morbid change in the state of the urine. The phosphatic urine is frequently observed in sickly and ill-fed children, in those that inherit a scrofulous constitution, or where we have reason to suspect the existence of diseased mesenteric glands. Again, in the decline of life we find that various circumstances, which contribute to break down the constitution, and affect the digestive and assimilative functions, diseases of the glandular system, and especially local injuries of the parts contiguous to the kidney, are among the frequent causes or concomitants of the phosphatic urine. It would appear also to be produced by mechanical irritation of the bladder; for it has been observed that a considerable number of the calculi, which are principally composed of the phosphates, possess a nucleus of lithic acid, or some substance which has been accidentally introduced into the bladder, and which appears, by its action upon that organ, to have contributed to the production of the excess of the phosphates, and their consequent deposition. As in the case of the lithic urine, so the phosphatic is sometimes connected with the purpuric state, thus affording deposits of various shades of colour.* We also find that the lithic and the phosphatic urine not unfrequently alternate with each other: it is this state of things which gives rise to one of the species of calculi which have been termed from their mechanical formation, alternating.† Upon the whole, we must consider the phosphatic urine as indicating a greater derangement of the system, and one which is less under the influence of curative means than the lithic.‡

5. *Purpuric urine.*—This is characterised by the colour of its deposit, which, in its ordinary state, has obtained the name of the lateritious sediment. It was recognized as the indication and concomitant of the febrile state of the constitution, among the earliest observations that were made on this fluid, and one which has always been regarded as among the most de-

---

ch. v.; Prout's Inq. p. 95 et seq.; *Henry*, Med. Chir. Trans. v. x. p. 132; *Smith*, Med. Chir. Trans. v. xi. p. 10; *Egan*, in Tilloch's Phil. Mag. v. xxiii. p. 199 et seq.

* "The combination of the phosphatic and the purpuric deposits may in most cases be distinguished from that of the lithic and the purpuric, by the latter being tinged with the brown colour of the lithic acid, while the former, being a mixture of a white and a purple substance, are of a purer pink colour."

† Marcet, pp. 59, 96.

‡ "Perhaps one of the most valuable parts of Dr. Prout's work is his chapter on what he styles 'the phosphatic or alkaline diathesis;' although, were we inclined to be hypercritical, we might object to the term *alkaline* as applied to this state of the urine."

cisive pathognomonic symptoms of an increased action of the arterial system. The first attempt to ascertain the immediate cause of the change of the urine appears to have been made by Proust,[*] but not with any great success, as he does not appear either to have ascertained the exact nature of the change, or the means by which it is effected. For the more correct information which we possess on the subject, we are indebted to Dr. Prout, who investigated it with his accustomed acuteness, and proved that a new substance, possessing the properties of an acid, is produced in the urine, which, from the colour of its combinations with the alkaline bases, he termed the purpuric acid.[†] He also rendered it probable that all the shades of colour which were observed in the urinary deposits, from reddish brown to pink and purple, may be referred to the mixture of the purpuric with the lithic acid, or with the phosphates of lime and magnesia.

With respect to the pathology of the purpuric urine, it may be simply characterized as the urine produced by that increased action of the arterial system which constitutes inflammatory fever; which, therefore, may occur either in its simple state, or in combination with the lithic or the phosphatic urine, when any circumstance induces febrile action while either of these states is present. It has been supposed that the purpuric urine is more immediately connected with the diseases of certain of the abdominal viscera, but we conceive there is reason to doubt whether this opinion be tenable, and we undoubtedly find that the purpuric urine exists, in the most marked form, where we have been unable to discover any traces of local inflammatory action. The existence of the purpuric urine in its various shades and combinations is almost as frequent an occurence as the lithic, and is in many cases produced by very slight derangements of the system. But when, on the other hand, it exists in a high degree, and continues for a long time without interruption, it indicates a morbid derangement of the functions, which it is often difficult to remove, and which must be regarded as leading to an unfavourable prognosis.

6. *Albuminous urine* is distinguished by its exhibiting the presence of the proximate principle from which it derives its specific appellation, when the appropriate tests are applied to it. The albumen sometimes exists in so great a quantity as to render the fluid more or less opaque when it is discharged from the bladder; but it may be frequently detected in the fluid by exposing it to heat or to certain chemical re-agents, when it is not otherwise visible. It seems to have been first distinctly brought into view by Cruickshank, in the essay to which we have referred above:[‡] it was afterwards very carefully described by Blackall, who considered it as a pathognomonic symptom of a peculiar species of dropsy, which, as he conceived, required a specific mode of treatment,[§] and has more lately been made the subject of consideration by Dr. Bright, in the series of his valuable pathological observations.[||] So ample an account of these observations, and of the discussions connected with them, has been given in the former parts of this work, and more especially in the article **DROPSY**, that it will be necessary for us to do little more in this place than to refer to them. We shall only remark that the

---

[*] Ann. Chim. t. xxxvi. p. 265-9.

[†] Phil. Trans. for 1818, p. 420 et seq., and Med. Chirurg. Trans. vol. ix. p. 481, 2.

[‡] Rollo on Diabetes, and Tilloch's Phil. Mag. vol. ii. p. 248.

[§] "Observations on Dropsy. We have a judicious critique on this work in the Edin. Med. Journ. vol. ix. p. 334 et seq."

[||] "In connexion with the account of the albuminous urine, which is contained in Dr. Bright's Medical Reports, the reader is referred to Dr. Christison's remarks in the Edin. Med. Journ. vol. xxx. p. 107 et seq. and to the observations of Dr. Gregory in vol. xxxix. p. 51 et. seq."

albuminous urine is symptomatic of increased action of the arterial system, connected with visceral derangement; generally of the kidney, (when it is frequently attended by dropsy) and occasionally of the liver, so as to constitute a very formidable disease. In other instances, however, it would appear to be produced simply by a morbid condition of the digestive organs, unconnected with any structural disease, and in this case to be of transient occurrence, and to be indicative of a slight derangement of the functions.

7. *Saccharine urine*, like the albuminous, derives its specific name from the presence of the proximate principle which is found to exist in it, and which constitutes the most remarkable pathognomonic symptom of the ordinary form of diabetes. This disease had been very correctly described by the ancients; but although they noticed the increased flow of urine, its peculiar condition, as containing a quantity of saccharine matter, was first pointed out by Willis. Of late years, since the chemical constitution of the animal fluids, both in their healthy and their morbid states, has been more attended to and better understood, the saccharine urine of diabetes has been the subject of very numerous experiments. The result appears to be, that the urea is in a great measure deficient, while in its place the kidney secretes a substance which has every property of sugar, both as ascertained by the spontaneous changes which it undergoes, and by the action of chemical re-agents upon it.*

With respect to the pathology of the saccharine urine, we may make the same remark as in the last section, that it has been so fully and ably discussed in the former part of this work in the account of DIABETES, that nothing remains for us but to refer our readers to that article, where they will find detailed every circumstance of importance connected with the peculiar state of the urine, the symptoms and prognosis of the disease, and its treatment. The only point on which we feel it necessary to offer any remark respects the nosological question, whether it be proper to confine the term diabetes to that state where the urine contains sugar, and which has been styled the diabetes mellitus. We have already given it as our opinion, that we believe a state of the constitution exists, which is intimately connected with the diabetes mellitus, and is indeed frequently the commencement or first stage of it, where we have every symptom of the disease, both general and local, except the saccharine state of the urine. As a question of technical nosology, it may be of little importance; but we are disposed to think that, if the practitioner were aware of the possibility of such an occurrence, he might perhaps, in some cases, be able to check the disease at the outset, and prevent it from acquiring the saccharine state, when it becomes so formidable in its symptoms, and so exceedingly difficult to remove."

There is an eighth section, devoted to miscellaneous or incidental circumstances, on which we shall not dwell. Dr. Bostock would have made the above article much more complete, and much more useful to the great mass of his readers, if he had added a concise account of the modes of applying the chemical tests to the analysis of urine. Authors, and especially chemical writers, should not conclude that all their readers are as well acquainted with the details of chemical analysis of the fluids as themselves. The modes of applying the tests to unhealthy urine are far from being generally known—and still less are they generally practised. The state of the urine, indeed, is too much neglected, even by talented and experienced practitioners.

---

* "In the eighth volume of the Med. Chir. Trans. p. 537, Doctor Prout has given the analysis of the saccharine urine: see also Chevreul, Ann. Chim. t. xcv. p. 319, and Bostock's Physiol. vol. ii. p. 361."

## Peculiar Affection of the Lungs of Infants.

M. Joerg, of Leipsic, has written an inaugural dissertation on this peculiar affection, from which a short extract has been made in one of our weekly contemporaries. It runs as follows:

"After some remarks on the physiology of the fœtus and the new-born infant, the author enters upon the description of the disease, and at once specifies its nature as consisting in a *concretion or agglutination of the pulmonary cells*, occuying a varied extent of one or both sides of the lungs. This agglutination does not proceed from inflammation, nor effusion, but from an imperfect respiration, which prevents the air from penetrating all the cells: the parts thus affected, therefore, retain the colour and consistence of the lungs of the fœtus, and do not swim in water.

The causes of this affection, a too easy and too quickly finished labour, and a too strong compression of the head of the child during delivery. These two circumstances prevent the respiration from being as full as it ought to be from the very first period, and thus give rise to the disease in question. This disease is particularly characterized by a superficial, short, anxious, and scarcely perceptible, and sometimes intermittent respiration, a feeble, plaintive voice, difficulty of sucking, a shortened elevation of the sternum and ribs, livid or blue colour of the skin, coldness of the body, universal debility, weak and slow pulse. These disorders of the respiration and circulation occasion imperfect nutrition, congestion of the brain, convulsions, and, in consequence of the violent respiratory efforts, inflammation of the bronchi and lungs.

So long as it is possible to make the child take a deep inspiration it is possible to save it. But if the respiration continues weak in spite of our endeavours, the patient is lost. The treatment consists in clearing the mouth of the mucus in it, striking the soles of the feet and the palms of the hands, as also the chest and back, with rods; rubbing the chest and back with sulphuric ether and introducing it into the nostrils and mouth. If the voice and respiration continue weak, these means should be persevered in during the time the child is in a simple or aromatic warm-bath. Besides these means, repeated clysters and emetics are employed; the latter, however, and indeed all means that drive the blood towards the head are contra-indicated when the brain is injured; in these cases calomel and sinapisms are useful by establishing a revulsion on the intestinal mucous membrane and skin, withdrawing the blood from the head, and preventing the excessive secretion of mucus in the bronchi. Moderate inflation of the lungs with warm air is also advisable; the introduction of oxygen or pure air containing too great a concentration of oxygen (*cold* air we presume the author means) is not advisable, the lungs of a new-born child being too delicate for such stimulation. Nine cases are appended to Dr. Joerg's work; his researches will doubtlessly contribute to increase of knowledge of the pathology of new-born infants, which is still so obscure."*

## Is there any Connexion, and what, between Acute and Chronic Rheumatism?

This question excited some surprize in the Westminster Medical Society, at a late sitting, and was warmly discussed. It was maintained by Dr. Johnson, that the two diseases above-mentioned had no necessary connexion—that they were different in their seat, their nature and their symptoms, as well as in their cure. He contended that the seat of chronic rheumatism was in the *muscular* fibres or their investing membranes—while that of acute rheumatism was in the synovial and ligamentous—or in other words, in the white fibrous structures. For all practical purposes, he observed, it was sufficient to say that the *acute* disease was in the joints and immediate neighbourhood, while the *chronic* affection was between the joints—that is to say in the muscles. Again, the one was attended with inflammation and fever, as well as pain—the other unattended by inflammation or fever. Chronic rheumatism was not the sequela of acute rheumatism. For one instance of chronic rheumatism succeeding acute, there are five hundred where there has been no preceding rheumatic fever. We do not see the two diseases become converted into one another, as we would, if they were only grades or conditions of the same affection. Acute rheumatism travels from joint to joint, and frequently is translated to internal organs—especially to the heart. Chronic rheumatism never affects the heart—and does not shift its place from muscle to muscle, as those who have experienced its tenacity to its ordinary locality can testify, to their cost. It is unnecessary to dwell on the difference of treatment, and the etiology of both is involved in obscurity. The one complaint appears to be a specific phlegmasia—the other a specific neuralgia. Acute rheumatism may be, and often is, followed by a chronic complaint—*in the same parts*—the synovial and white fibrous tissues—but not by chronic rheumatism in the muscles.

---

* Dr. Ryan's Journal, No. 153.

All these considerations, and many others that might be mentioned, induced Dr. Johnson to reject the term "acute rheumatism," and "rheumatic fever," entirely, and to substitute ARTHRITIS—a term to which it is as much entitled as gout. There is no essential diagnostic mark or difference, he maintained, between gout and acute rheumatism—and, therefore, they were but modifications of the same disease, depending on idiosyncracy, and other circumstances with which we are unacquainted. It was objected to Dr. Johnson, that acute rheumatism was almost confined to the poor, while gout was almost exclusively the portion of the rich. It was also stated, that gout was greatly dependent on disordered conditions of the digestive organs. These arguments, Dr. J. contended, were in his favour. There was as much disorder of the digestive organs among the poor as among the rich—if not more. The difference of circumstances in which the two classes are placed, might cause the difference between gout and acute rheumatism. All practitioners acknowledge that, in many cases, they cannot tell which is the disease—and, therefore, frequently adopt the terms "rheumatic-gout," or "gouty rheumatism," which the community have long before adopted. Neither is there any very material difference in the treatment of the two modifications. In both, there is occasional necessity for local depletion—and in neither is there often occasion to bleed from the arm. Colchicum is as useful in the one case as in the other. In both the urinary secretion is highly coloured and lateritious. In both, the digestive organs are in fault. In both diseases, the inflammation is prone to travel from place to place, and to attack internal organs. In both, it is unsafe to apply cold topically to the inflamed part—especially where the constitution is not vigorous, and where all the internal organs are not performing well their functions. Finally, Dr. J. contended that, both in gout and acute rheumatism, the warm bath is seldom safe—except where there is a metastasis to an internal organ from the extremities.

These hints are thrown out for the consideration of our brethren.

## REMARKABLE CASE OF DISEASED HEART.

The case here narrated occurred in St. George's Hospital, under the care of Dr. Seymour, and was communicated to our weekly contemporary, conducted by Dr. Ryan. It is as follows:

"A man named Lane was admitted about six weeks since under the medical care of Dr. Seymour, labouring under pulmonary bronchitis, with some obscure symptoms of affection of the heart. The usual remedies were administered with very beneficial effect, which, however, soon passed off, and the symptoms continually recurred.

The patient coughed up some frothy mucus, tinged with bloody sputa, but nothing more. We should also remark that there was palpitation of the heart, and that the remedy from which his general symptoms derived the greatest relief was calomel and opium.

His symptoms proceeded in this manner towards a gradual improvement for some time, when, having occasion to go to the water closet, and strain at stool, a most intense spasmodic paroxysm of pain came on violently, shaking and convulsing all the muscles of the body, and requiring four men to control him. Coupled with this, was very great and severe dyspnœa, which shewed itself in his features so strongly, as amply to justify the truth of Dr. Seymour's remark, that he had never seen a countenance indicative of such intense agony. He complained, however, most of severe and excruciating pains in both lower extremities. Within an hour after this paroxysm gangrene supervened in the right lower extremity, and the usual remedies of warmth and stimuli were administered, the limb was wrapped round and kept warm by means of hot flannels. The actual pulse could not be felt in the right inguinal region for two or three days previous to his death.

We attended the post-mortem examination on the 19th. We understand that the man expressly wished that his body might be examined after death. The general cellular structure of the lungs was engorged with blood, but not sufficiently so as of itself to form a cause of death; the right lung was, however, more vascular than the left, and on its anterior external surface there was a spot, of about the size of a sixpence, which presented a darker and more gangrenous appearance than the surrounding surface, and which was in a state which, for want of a better name, we shall denominate apoplectic; there was also some serum effused on the same side, and some marks of old adhesive inflammation could be seen. On the surface of the pericardium being exposed, it appeared to be unusually large, and on being slit open, the heart was found to be greatly enlarged. As, from the symptoms during the latter period of the patient's life, the diagnosis formed was that of aortic aneurism, the heart with the aorta, as far as the termination of the common iliac arteries, were removed, but no aneurism could be detected. There was a dark, gangrenous spot over the middle of the anterior and external surface of the right ventricle, which Dr. Seymour believed would reveal something of the mysterious cause of all the symptoms under which the man laboured; this prognosis was not however verified. On cutting open the heart, its cavities were found to be unusually enlarged, and its walls proportionally thinned, and at the base of the right ventricle the structure of its walls was found to be completely disorganized; it crepitated upon pressure between the fingers, and presented the appearance, as Dr. Seymour very justly remarked, of a muscle after it has been severely bruised, the other portions of the heart presented no other unusual appearances than those we have mentioned; on slitting open the aorta, its lining membrane was found to be unusually vascular, and studded here and there with patches of atheromatous matter, at one portion of it, (the anatomical relation of which we cannot state, from the parts being isolated when we saw them) the cellular tissue beneath the lining membrane appeared broken down and disorganized, the membrane itself over it being entire. At its bifurcation the right common iliac was plugged np with coagulated blood, an appearance which we also remarked was presented along the femoral artery of the same side, which Sir Benjamin Brodie laid open through the entire course. The abdominal viscera were not minutely examined, but their general appearance indicated no great abnormal state of parts. The cranium was not opened nor its contents examined, no symptoms of any kind during the man's life being referable to any of the nervous structures.

Thus far to our minds, and to the concurrent opinion of all who witnessed the autopsy of this case, did the post-mortem appearances, detailed above, reveal nought of a satisfactory nature, at all conclusive as to the immediate exciting cause of the rapid supervention of gangrene the few days preceding the man's death. Such symptoms have generally been considered as diagnostic of the presence of an aneurism of the aorta, or some of its large iliac branches, and that extreme pain in the lower extremities has been generally caused by the bursting of the aneurismal sac, symptoms which occurred in a case admitted into the hospital, so far back as during the assistant-surgeoncy of Sir Benjamin Brodie, in which there was found, after death, an aneurismal sac, connected with one of the common iliac vessels under Poupart's ligament, as related by that gentleman to Dr. Seymour during the above autopsy.

The conclusion at which Dr. Seymour arrived, respecting the above case, was, we believe, that during the straining at stool, above referred to, some portion of the musculo-ventricular structure of the heart gave way, which so materially weakened its power of contraction, as to unfit it for propelling the blood in a continued circulatory stream into the lower extremities, and that from the circumstance of there being thus, as it were, a pause in the powers of the circulation, coupled with the fact of this patient having an old inguinal hernia of the right side, which pressed upon the vessels in this spot, the current of the blood in this limb had, thereby, a greater tendency towards coagulation afforded to it, which effectually prevented the further flow of warm blood through the limb, and thus became the cause of the supervention of gangrene in the part, and of the ultimate death of the patient.

The case, we believe, was watched with great interest by many gentlemen attending the medical practice of the hospital, who are profoundly versed in the acoustic mysteries of the stethoscope; some went even so far as to state, to a hair's breadth, the extent of the diseased surface affecting the valves of the heart; but we regretted to find that, from what we witnessed, their enthusiastic predictions were found to be in nowise verified."*

We are inclined to take the same view of the pathology of this case—or rather the cause of the phenomena preceding death—that Dr. Seymour has done. We may remark, however, that mortification of the lower extremities is not a very rare occurrence in hypertrophy of the heart. We have seen several instances of it. The wonder is that it does not take place more frequently. We know that great œdema of the legs and feet is almost constantly present in the advanced stage of cardiac hypertrophy, and the occurrence of sphacelus in certain constitutions, under such circumstances, is an event that might be reasonably expected—and does occasionally supervene.

We apprehend that the sneer at auscultation at the close of the narrative, is rather misplaced, and probably unjust. We do not believe that any person, however "profoundly versed in the acoustic mysteries of the stethoscope," would venture to predict "to a hair's breadth," the extent of disease in the valves or in any other part of the heart. We venture to affirm, nevertheless, that the auscultation, in this case, did prophesy hypertrophy of the heart, before the fatal train of symptoms set in, though the straining at the water-closet may have accelerated the death of the individual.—*Eds.*

## MEDICAL JURISPRUDENCE.—POISONING BY ARSENIC.

One of the most remarkable instances of *retributive justice* on record, has lately occurred at Bristol, and we may proudly assert that the crime of murder has been brought to light almost entirely through the instrumentality of medico-legal science. We shall greatly abridge the circumstantial evidence, in order to give ample space to the chemical and pathological portions of the trial.

An aged lady, Clara Ann Smith, who had accumulated some money, and was of penurious habits, went to lodge with a Mrs. Burdock, in Trinity St., Bristol. Having got some cold, she became unwell, and was attended by a little girl in her lodgings, who turned out to be a material witness in the end. In the course of the old lady's illness her landlady (Mrs. Burdock) administered to her a basin of gruel, which the girl observed to be of a brownish colour, soon after taking which, she vomited, and complained of dreadful pains. She spat up some blood, but did not cough. No medical assistance was summoned, and the old lady died in the course of the night. She was very privately interred, and none of her relations were then made acquainted with the death. Fourteen or fifteen months had passed away, when suspicions were excited, and, on application to the magistrates, exhumation was ordered, and an inquest was held on the body. We shall quote the medical and chemical evidence from the Medical Gazette of January 10th, 1835.

---

* Dr. Ryan's Journal, Jan. 3, 1835.

"Dr. HENRY RILEY stated that he went with Mr. Kelson and others to open the body of a female interred in St. Augustine's church-yard. On the coffin-plate, which was partially destroyed by rust, was written 'Mrs. Smith,' aged 60 odd years; the grave was much deeper than usual for so common a coffin, and there was no water at the bottom; the coffin was made of common elm, such as is used for burials of paupers, and was screwed down in the usual way. On the lid being removed by the undertaker, they saw the remains of a human being; there was some loose earth on the breast and abdomen, which had got in through a slit in the lid, and a considerable quantity of water, which covered part of the breast, the abdomen, legs, and arms; the upper surface of the face and neck were above the level of the water; the body had on a shroud, an under garment, a pair of stockings, marked with red thread C. S., and the remains of a cap could be traced on the head. The body-clothes were slit down the centre, so as to throw the dirt which had fallen through the opening of the lid on either side; by these means the body was exposed to view; it was that of a thin person; the chest had not fallen in, and there was no appearance of its having been opened. Mr. Kelson and witness then opened the chest and abdomen, by cutting through the cartilages of the chest and ribs on either side of the sternum, continuing the incisions downwards; thus the chest and abdomen became fully exposed. They found that all the parts which were below the level of the water were turned into adipocire; the external surface of the stomach and intestines appeared of a pale bluish colour; there did not appear any traces of disease or inflammation of the peritoneal surface of the abdomen; he did not think that there was any water in the latter cavity until it flowed into the thorax, and thence into the abdomen, at the time of opening; they next took out the whole of the intestinal canal from the œsophagus downwards, and placed the different parts in separate vessels; in separating the small intestines from the duodenum, they noticed a considerable quantity of a yellow substance covering the mucous membrane of the latter, and were surprised to find that the whole of this canal presented such an extraordinary degree of firmness, and was so slightly decomposed; it was as firm as that of persons who died in an ordinary way, and who have been dead but a few days; the liver had shrunk to a fourth or fifth of its natural size; it was not thicker than his hand; the pancreas presented nothing peculiar in its appearance; the lungs had collapsed, and were reduced to a fourth of their volume; they were of a dark colour; approaching blue or grey; he did not see any thing like tubercles in them, nor any thing peculiar with regard to the pleura, nor did he observe any adhesions; the heart was collapsed and shrunk, but there was no appearance of disease in it; the diaphragm was little changed and perfect. Witness cut off the head, for the purpose of identity by the teeth. The stomach and alimentary canal were removed to the Medical School for examination; there were yellow spots in several parts of the peritoneum; they were of a bright yellow colour, identical with that alluded to as being seen on the mucous membrane of the duodenum; they were in the largest quantity on the stomach, and also visible on the upper part of the intestines, and were besides visible in one or two places on the mesentery; where the spots were seen outside, they were also traced internally, as extending through the whole substance of the intestines; the mucous membrane of the stomach was firm to an extraordinary degree, and there were no ulcerations upon it; the dark red colour it presented might either proceed from intense inflammation or from decomposition; he inclined, however, to the opinion that it was the former, otherwise the membrane could not have been so firm; the greater portion of the spots were near the pyloric extremity of the stomach; the yellow matter was spread over the whole mucous membrane of the stomach as well as the duodenum; it could be scraped off in large quantities, and especially from the stomach; the matter most resembled in colour sulphuret of arsenic, commonly called orpiment; he did not think that it arose from an infiltration of bile; the mucous membrane of the jejunum presented the same dark colour: it was equally firm with the other parts; traces of the yellow matter were also seen in this portion of the intestine; in the great intestine the mucous membrane was of a very dark red, it was extremely firm, and spotted of a dark slate colour, particularly so in the neighbourhood of its upper part of the near ilio-cœcal valve; it had no yellow spots or ulcerations; the appearances of this intestine were such as are commonly found in cases of chronic diarrhœa of long standing; the slight change it had undergone was as striking as that of the stomach; in the latter and duodenum he saw little else but this yellow substance; in the smaller intestines there was a small quantity of brownish fluid, something like cocoa. He attributed the firmness of the intestinal canal to some antiseptic substance, and sulphuret of arsenic was said to be so in a very great degree; he did not mean to say that there were no tubercles in the lungs, but merely that he did not see them; the dark slate colour of the mucous membrane of the intestinal canal is said by the French pathologists to indicate chronic inflammation.

Cross-examined by Mr. PAYNE, (counsel for the defence.)—A chronic inflammation would certainly occasion death, and it might have occasioned a griping pain in the side. Witness had not seen much of the effects of arsenic on the human body, that is, to the extent of death; the sulphuret has the same general effects as the white oxide of arsenic; the old opinion was that they did corrode, and the modern one that they do not; he was convinced that the yellow spots on the stomach penetrated from the inside to the outside; witness has never seen a person killed by taking arsenic; it was used in cases of cancer, and some others, as cutaneous diseases, fevers, &c.; it was never administered in this country as orpiment, but when combined with an alkali, and it was then called Fowler's solution. This was the first stomach poisoned to death by arsenic that he had seen; none but a rogue or a madman would administer arsenic in so large a quantity as had been found in this stomach by Mr. Herapath; if any medical man had done it, he would deserve to be hanged. In administering Fowler's solution they proceeded with the greatest care; if arsenic were exhibited, they would expect the appearances found in this old lady's stomach, and he felt as confident as that he sat there that her death was occasioned by arsenic; the grave in which she was interred was a deep one for so poor a coffin; in some cases graves were eight or nine feet deep, and from the number buried in them the last body did not probably lie more than two feet from the surface—a very unhealthy and abominable practice.

Dr. Riley was, in a subsequent part of the proceedings, recalled, when he described the effects of Fowler's solution as distinguished from the orpiment that had been administered in this case; the effect of arsenic when taken in over-doses, would be an inflammation of the mucous membrane of the intestinal canal, accompanied with great emaciation and debility, loss of hair, and occasionally of the nails. He had heard the evidence of the girl Allen, and his opinion was that the deceased had been labouring under a most violent ptyalism, because the membrane of her mouth had been stated to be swelled, ulcerated, and bled extremely; she spit blood, and her cheeks and lips were swelled; he was not aware that ptyalism was the result of an exhibition of arsenic; he did not mean that it would not produce ptyalism, but he had not seen it; he thought it most likely that the ptyalism was brought on by taking mercury; he did not doubt it the least in the world that arsenic produced death in the present instance. He never saw a case of death occasioned by arsenic in small doses, taken as Fowler's solution; has seen symptoms produced by it short of the loss of hair and nails, such as sickness and loss of appetite; as arsenic becomes oxidized, it is hurtful; the white oxide is used extensively to preserve birds.

### *Chemical Evidence.*

WILLIAM HERAPATH.—Is Lecturer on Chemistry and Chemical Toxicology at the Bristol Medical School; was applied to on Monday last, the 22d, to examine the body of the deceased; undertook to do so, and to analyse the contents of the stomach; was present during the whole of the time of the disinterment, and the taking out of the viscera in St. Augustine's Church-yard; received them from the hand's of Dr. Riley and Mr. Kelson, the medical gentlemen employed; placed them separately in two basins, which had been carefully wiped clean by himself—the stomach and duodenum in one, and the intestinal canal in the other; the stomach was whole, there was no orifice, and no loss of any of its contents worth noticing; tied up the basins with their contents in a cloth, and gave them to a man to carry to the Medical School; never lost sight of him the whole way. The appearance of the body in the church-yard was such as to lead witness to believe that it had been under the influence of an antiseptic; the body was, generally speaking, rapidly passing to a state of animal soap; or adipocire; the stomach and intestinal canal were in an unusual state of preservation, so much so, in fact, that upon seeing the viscera opened, he exclaimed, 'This looks like the effects of arsenic;' as it is a well-known fact that that poison has the effect of preserving the parts contiguous to it; and tends to assist the changing the other parts into adipocire. Upon receiving the parts, witness invited all those who were interested in the case to accompany him as he intended to operate in public; the Solicitor, and three medical gentlemen employed by the accused, accompanied witness, with many others, to his own theatre, at the Medical School, where he put a new deal board on the lecturing table, and placed on it the stomach, which was still entire, with the exception of two small cuts which must have been made in taking it from the body; witness slit it open with the scissors, and found a great portion of it thickly covered with a yellow pasty matter, looking like wet clay; all the apparatus used by witness was either entirely new, or had been carefully cleaned by him previously. As he was strongly inclined to think this powder was sulphuret of arsenic, he proceeded to treat it as such; he separated a small portion of the yellow substance with the spatula, absorbed the moisture on blotting paper, and then dried it; witness mixed it with a certain proportion of carbonate of soda and charcoal, both well dried, and put the whole into a reducing tube, and immediately sublimed metallic arsenic; this metallic arsenic was made the subject of the other experiments: witness first heated it, allowing the air to enter the tube, and it became oxidized, and sublimed into a white crust; this formed the second test of the presence of arsenic. Witness then introduced two drops of water into the tube containing the white crust, and with heat dissolved it; these two drops were made the subjects of two experiments. Into one he put a minute portion of ammoniacal sulphate of copper, and immediately found the green precipitate of Scheele, or arsenite of copper; into the other drop he put a minute portion of the ammonical nitrate of silver, and the yellow precipitate of the arsenite of silver fell. He had thus four tests of the presence of arsenic; it only remained to be brought back to its original state by passing a stream of sulphuretted hydrogen through the arsenious acid; this he did, and obtained the beautiful yellow of the sulphuret of arsenic; he had gone through these experiments four different times, and all with the same results. He next attempted to discover what quantity of the yellow substance there was left in the stomach; there was nothing of any importance in the stomach besides; he inverted the stomach into water, and washed its internal surface; he allowed the yellow powder to subside, and filtered the fluid so as to separate the yellow matter; in doing so he found that certain portions adhered to the internal surface of the stomach, and in two spots an infiltration had taken place into the substance of the stomach itself, the quantity collected could not be well separated from the filtering paper, on account of the animal matter; the nearest estimate by weighing, and counterpoising an equal sized piece of paper, gave seventeen grains as the weight of the substance and animal matter. To get rid of the animal matter he introduced (taking away four grains for the purpose of other experiments) the paper and its contents into a flask with nitric and muriatic acids, and boiled it till every thing was either decomposed or dissolved, except the fibres of the paper; and next filtered and extracted the whole of the fluid, and then precipitated the arsenic by means of sulphuretted hydrogen; the thirteen grains yielded witness four grains of sulphuret of arsenic. There are but two metals that will give the yellow precipitate with sulphuretted hydrogen; the one is cadmium, which is exceedingly rare, scarcely ever to be met with in this country; he had about half an ounce of it, which he should think is more than there is in all the kingdom besides; the other is the peroxide of tin, which is also scarce, and is not used at all as an article of commerce or medicine, and in this case could not possibly exist.—(Mr. H. then shewed to the jury the matter which had been taken from the stomach, and which had produced the yellow precipitate, or sulphuret of arsenic; and also specimens, in sealed tubes, of the action of all the other tests. The stomach itself was also exhibited, and the yellow spots were very apparent, and some of the yellow matter still adhered to its coats.)

By the CORONER.—He believed there is no well-authenticated case of how much sulphuret of arsenic will destroy life; the quantity will differ with the proportion of the materials used in manufacture; native orpiment is not so poisonous as the factitious; it is possible that it might have been swallowed in the form of white oxide, or arsenious acid; arsenic is in common called "white' or 'yellow' arsenic and would be sold by druggists under those names; white arsenic is chemically called arsenious acid, and yellow arsenic, sesquisulphuret of arsenic; they are both poisonous, but not equally so; white is the most poisonous; all compounds of arsenic are poisonous; the operation of each is nearly similar. He had never seen a stomach operated upon by arsenic before; should think the yellow spots were caused by the rapid operation of the arsenic suspended abruptly by death; if they had taken place after death, they would, in his opinion, have been as generally extended as the sulphuret itself; both sorts of arsenic are very cheap; he had not the slghtest doubt of the nature of the poison found in the stomach; he could stake his existence on the fact of the presence of arsenic in the stomach and intestinal canal; cannot say in what state the arsenic was taken; the process of decomposition sometimes produces sulphuretted hydrogen, which would convert white arsenic into orpiment; that found in the stomach is orpiment; cannot positively say in this case whether sulphuretted hydrogen had been produced, because adipocire was formed, and the decomposition of the body did not proceed as is usual; he was certain arsenic could not have been introduced after death, as the stomach was whole when it came into his possession; witness's attention was first arrested by seeing a small drop of yellow matter ooze from the stomach;

the great quantity of yellow substance in the stomach struck him at once that he should find a mineral poison. He observed no bile in the stomach; there was nothing of importance in the stomach; if there had been bile he must have seen it; he was certain there was no bile.

Cross-examined by Mr. PAYNE.—Sulphuretted hydrogen might enter into the stomach from other parts of the body, although there was no orifice; he thinks the yellow spots were produced during life; he had not seen many stomachs that had received poison; he had frequently the contents of stomachs sent to him to analyse; in the stomachs he had analysed he had never met with any arsenic: this is the first, and he hoped it would be the last; this matter in the paper and the tube are both from the stomach; it is the same as is sold in the shops for yellow arsenic; should think that the four grains he reserved, and what adhered to the coats of the stomach, with what he worked off, would yield 5½ or 6 grains of the pure sulphuret of arsenic from the stomach alone.

Mr. KELSON was then called, but stated that he was not aware that he could add any thing to Dr. Riley's evidence; it was so clear and ample.

Dr. J. A. SYMONDS, lecturer on Forensic Medicine at the Bristol Medical School, was present at the disinterment of the body of the deceased, and at the subsequent operations. His conviction was, that poison (sulphuret of arsenic) was in the stomach and intestines; he had never seen the body of a person who had died from arsenic before; the effects of an over-dose of arsenic would be extreme purging. Hahnemann, a German physician, states that two grains of white oxide of arsenic will destroy the life of an adult; the smallest quantity, in an actual well-authenticated case, is four grains; it is recorded by Zittman. Professor Christison, the first authority in this country, says four and a half grains have killed, and mentions the case. M. Guibourt, a French chemist, states the analysis of artificial orpiment to consist of 94 parts of arsenious acid and 6 of sulphur; this analysis is confirmed by Orfila; ordinarily a poisonous dose would operate in half or three-quarters of an hour; it varies with circumstances—it may operate much earlier."

Our readers cannot fail to admire the precision with which the main fact of the case—the administration of poison—was here ascertained. Thirty or forty years ago, medical jurisprudence was at so low an ebb in this country, that even the attempt to discover poison, after fifteen months' inhumation, would hardly have been attempted. Too much praise cannot be awarded to the medical officers—and especially to Mr. Herapath—for the talent which they displayed on this important occasion. We regret, with our contemporary of the Gazette, that a more exact description of the external appearances of the corpse, is not given, after so long a sojourn in the grave. We are so little accustomed to such exhumations, that the question of identity might very much depend on such a description in future cases. We have no doubt that some of the medical gentlemen employed on this occasion, will furnish these particulars from their notes, or from memory, for the benefit of the profession.

## SIGNS OF PREGNANCY.

Under this head, Dr. Ingleby has published an instructive article in the December No. of our Dublin contemporary. His object is not to treat of the signs of pregnancy in general; "but to comment briefly, both on some of the supposed evidences of gestation, and the difficulty of forming a clear diagnosis—and also to advert to the signs which denote cessation of life in the embryo or fœtus, pointing out also their absence, modification, uncertainty and indeterminate nature." The following is the classification which Dr. I. adopts.

"I. The effect of vomiting.—II. Sanguineous discharges. — III. The state of the breasts.—IV. Twin cases, and the expulsion of foreign bodies from the uterus.—V. Fætor of the discharges.—VI. Ascent of the uterus, and the state of the cervix uteri.—VII. State of the hypogastrium, and examination *per vaginam.*—VIII. Obliquity of the uterus.—IX. Size of the abdomen apparently stationary.—X. Dropsy of the abdomen.—XI. Diminution of the size in the abdomen.—XII. Irregularity in the form of the abdomen. XIII. Fœtal movements.—XIV. Auscultation.—XV. State of the funis.—XVI. Looseness of the cranial bones, puffiness of the scalp, desquamation of the cuticle, changes in the fœtal presentation, and sundry constitutional symptoms."

1. *Vomiting.*—This symptom usually ceases soon after quickening, though it sometimes continues to harass the individual till the period of parturition, "These acts of vomiting are strongly in favour of the preservation of fœtal existence, and I do not recollect an instance of their continuing after vitality in the ovum had ceased. They are sometimes suddenly arrested by hæmorrhage. Venesection is one of the most powerful correctors of obstinate and protracted vomiting.

2. *Sanguineous Discharges.*—A single attack of hæmorrhage may prove fatal to the embryo, and even to the mother —and that, too, in the early stage of pregnancy. The fœtus may perish, and yet remain in utero till the ninth month. In some cases, the hæmorrhage will be almost unceasing for months, without injury to either mother or child. A discharge resembling healthy menses occasionally continues during the first two or three months of pregnancy, without apparently influencing gestation. Menstruation appears to be necessary to impregnation, though some women (though rarely) conceive while suckling. Amenorrhœa, when preceded by a bad state of health, is a very equivocal sign of pregnancy.

3. *State of the Breasts.*—The enlarged mamma becomes uneasy, with blue veins and prominent nipple; whilst the areola, instead of presenting the rosy circle around the nipple, acquires a yellow, or rather a dark colour, with increased diameter, and follicles yielding a moisture. This is occasioned by pregnancy *only*, according to Dr. Montgomery. It is a tolerably correct criterion for a *first* pregnancy; but not so certain for subsequent ones. The secretion of milk is not an infallible test of pregnancy, as the following case will shew.

"A young woman of spare habit of body, declared that she had attained the tenth month of her pregnancy; the usual morning sickness was followed by a discharge of milky serum, which kept her linen constantly wet, and subsequently, by movements which distinctly simulated those of the fœtus, and such as she had experienced in her two preceding pregnancies. On examination (*per vaginam*,) in place of an impregnated uterus, I detected a firm tumor, the size of a large egg, situated at the posterior and lateral parts of the neck and body of the uterus, and bulging into the rectum; menstruation was regular, but as might be expected, excessive. The pulsations of the abdominal aorta were very strong, but she declared that these were not the movements which occasioned the deception. I could not determine their character,"

Enlarged mammæ, from disease, usually disappear after a few weeks, though the disease itself may go on progressing. The following are the changes, according to our author, which commonly result from extinction of life in the ovum.

"The areola loses a portion of its darkness, the follicles and nipples shrink, the nipples cease to yield a serous or milky discharge, and the mammæ suddenly diminish in bulk. Towards the close of an ordinary menstrual period, the congestion of the mammæ, which immediately precedes the act, begins to subside."

Passing over the section on twin-cases, which we cannot abridge, we come to—

4. *Fœter of the Discharges.*—This is regarded as a prominent sign of extinction of fœtal life. "Blood, when confined only for a short time within the uterus, and exposed to atmospheric in-

fluence, soon becomes fetid." *Query.* How does atmospheric air get at blood confined within the uterus? We believe there is a medico-legal question now pending—perhaps decided—respecting the putrefaction, or supposed putrefaction, of the dead fœtus in utero. Does the fœtus become decomposed in utero, when deprived of life?

A high degree of fœtor may take place in the natural mucous secretion which lubricates the vagina—a peculiarity compatible with a healthy constitution and a living child. A very fetid state of the liquor amnii is quite compatible with vitality in the ovum."

5. *Ascent of the Uterus—State of Os and Cervix Uteri.*—Although quickening takes place about the fourth month, the ascent of the uterus is very uncertain, being regulated partly by its own development—partly by the size of the pelvis. It will ascend prematurely when the liquor amnii is in excess, or when the cavity of the uterus is distended by fluid, the product of disease.

"In the practice of my friend, Mr. George Elkington, a woman was seized in the early weeks of pregnancy, with an active hæmorrhage from the uterus, and it was supposed she would miscarry: presently, however, the case was rendered unusually obscure, by the vastly disproportionate increase of the abdomen. Instead of the uterus being found near the brim of the pelvis from the third to the fourth month, the abdomen had become both suddenly and generally distended by it. Vigorous contraction soon came on, and the expulsion of an immense quantity of hydatids, and a small fœtus was the result. Hydatids simulating natural pregnancy is not an unusual circumstance."

Our author is not aware that the presence of hydatids can be distinguished from a healthy state of the ovum. They produce a train of symptoms characteristic of early conception—and their evacuation is generally attended by a train of symptoms resembling abortion. Our author relates a case, where the premature elevation of the uterus appeared to be influenced by "an unusually large pelvis." On examination, before she could have passed the *third* month of utero-gestation, he found the body of the uterus enlarged, and the summit of the fundus within an inch of the umbilicus. Expulsive pain followed, and terminated in the discharge of the liquor amnii, and a very small fœtus and placenta, apparently of about eleven or twelve weeks' growth. For the life of us, we cannot see how the foregoing case proves "an unusually *large* pelvis." To our apprehension, it would seem to prove just the reverse—unless plenitude of capacity means, on the other side of the Channel, diminution of size. "From the fourth to the sixth month, *ballottement* of the uterus will afford very decisive information; but although we thus obtain an assurance that its cavity contains a child, we may remain in ignorance whether or not the child possesses vitality." Our readers will perceive that, a little before, Dr. Ingleby tells us that hydatids cannot be distinguished from natural pregnancy—how, then, can the "*ballottement*" afford us "decisive information?" Those of our readers who are not acquainted with French terms, must not suppose that "*ballottement*" means "balloting"—though it is curious enough that there is some similarity in the two operations.

The gravid uterus may remain within the pelvis as late as the sixth month, of which an example is given.

"Mrs. T. ætat. 20, has been married about a year, and the last act of menstruation terminated in the first week in January, 1834. The non-recurrence of the catamenia was not followed by any of the early signs of pregnancy, but about the end of May, a peculiar fluttering sensation favoured the idea of pregnancy. The fluttering continued very sensibly increasing until the end of June, when it entirely ceased. Accustomed to menstruate with great regularity, no doubts were entertained respecting the existence of pregnancy; until it was discovered that the abdomen had not at all increased in size. I was consequently desired to see her on the 10th of August.

There was neither vomiting, sickness, discharge, sense of weight, coldness nor pain; the breasts were slightly enlarged, the superficial veins peculiarly distinct, and the areola but imperfectly formed; the abdomen was in no respect enlarged. Notwithstanding the patient's spare habit, I could not feel any part of the uterus above the brim. On internal examination, I found the cavity of the pelvis occupied by a large tumor, resembling the head of a child, which had descended within nearly an inch of the vaginal orifice. The cervix uteri had very nearly disappeared, and the os internum was soft and slightly open. Although the *ballottement* of the uterus was quite impracticable, I felt certain of the fact of pregnancy, and testified accordingly, but my opinion as to the vitality of the ovum was very guarded. Four days after this visit a slight hæmorrhage ensued, which was followed by pains, and the expulsion of a still-born and decomposed six months' child. The gravid uterus, instead of rising out of the pelvis at the fourth month, may lie completely beyond the os externum. In one instance of this kind, I succeeded both in returning the uterus within the pelvis, and retaining it there by means of a very large globular pessary, until the natural elevation had taken place."

The os uteri acquires a laxity of texture soon after conception, which it does not present at other times—but the cervix uteri undergoes little change, antecedent to the fifth month. About this time, the developement of the structures commences; "but this developement may be occasioned by an extraneous tumor, in degree almost as great as by the growth of the ovum."

6. *State of the Hypogastrium—Examination per vaginam.*—We shall extract the following passage, as it cannot be abbreviated.

"Inaccuracy in diagnosis is generally the result of our examination being made in a desultory manner, and in unfavourable positions of the body. For the purpose of examining the uterus above the pubis (the bladder and rectum being previously evacuated), the body should be supine, the head and shoulders being rather elevated, and the abdominal muscles relaxed. The hypogastric and iliac regions must be carefully explored, and if a hard body be felt, the fingers should be applied so as to ascertain, if possible, its volume, form, consistency, mobility, and connexion with other organs.* Examination *per vaginam* may be conducted in the same position of the body, but it is sometimes advantageous to make this examination when the patient is erect, by which the size and weight of the uterus, if not its amount of elevation, will be more correctly determined. It may be advantageous to conduct the super-pubic examination in the same posture, making the requisite allowance for the comparatively relaxed state of the abdominal parietes in women having previously borne children. Percussion of the abdomen, when properly performed, is strikingly advantageous in determining the nature of abdominal enlargements, whether occasioned by a solid body, the evolution of gas, an excess of liquor amnii, or other fluid depositions. In pregnancy the fundus uteri will not be felt above the pubes until the end of the third month, and there is no *visible* increase of the abdomen before this period, but afterwards the enlargement will be progressive. When the centre of the hypogastrium is rendered prominent, and even (varying a little in these respects with the motions of the fœtus) moderately firm, or slightly elastic, the outline being defined, and having the intestines on either side and above the tumor, such condition presents the strongest characters of pregnancy.

The contrast between the state of the hypogastric and epigastric region, from the fifth to the seventh month, especially when the patient stands erect, is very marked. There can be no difficulty in ascertaining whether the uterus *is* or is *not* enlarged, but whether the enlargement is occasioned by conception, may be less easily determined. Great stress has been laid upon the state of the umbilicus, which in early pregnancy may be actually more retracted than natural, on account of the uterus being more or less prolapsed. In advanced pregnancy, the umbilicus will either be on a level with the surrounding parts, or project beyond them. The appearance of the abdomen, notwithstanding the elevation of the umbilicus, may greatly deceive us. It would appear improbable that a distended state of the abdomen, from visceral enlargement, should be confounded with the gravid uterus; but it must be recollected, that the shape of the abdomen may in no respect differ from a state of advanced pregnancy, and the patient may also experience the constitutional evidences of that state of the system."

---

* Boivin and Dugés, translated by Heming, page 31.

Some curious cases are given of mistakes respecting pregnancy, and where substances in or near the uterus gave rise to suspicions of utero-gestation. We must refer to the work itself for their details.

7. *Obliquity of the Uterus.*—This is referred to three causes—1, to deformity of the pelvis and spinal column—2, to distended states of the colon, the ordinary form of obliquity described by authors—3, to relaxation of the abdominal coverings. Obliquity is rarely noticed in first pregnancies, on account of the resisting state of the abdomen; and the third form is rarely seen before the seventh or eighth month, when its nature cannot be misunderstood. When it occurs about the fourth month, its cause and nature are often obscure.

8. *Stationary Size.*—The abdomen may acquire an ordinary and proper degree of enlargement at a certain period of utero-gestation, and afterwards cease to alter its dimensions, though the fœtus be alive.

"A woman, four months pregnant, and who had quickened about a week, was suddenly seized during the night with a copious discharge of the liquor amnii, which recurred frequently in drainings and occasional gushings, attended with pain, and followed, at times, by hæmorrhage. These discharges continued without intermission till within a few days of her delivery, which occurred shortly after the seventh month. During the three intervening months, the abdomen did not visibly enlarge, and although the movements of the fœtus were not felt after the first appearance of discharge, it was born living, but very feeble. From the sudden arrest of size, the friends of the woman were incredulous as to the existence of pregnancy. Under these and similar circumstances, as already observed, the neck of the uterus will not shorten, or more correctly speaking, not develope its structures, until an unusually late period of gestation."

9. *Dropsy.*—Pregnancy and ovarian dropsy often occur simultaneously—the general health being frequently but little affected by the latter disease. But the excitement of pregnancy may give the ovarian complaint a malignant tendency. On the other hand, all dropsical tendencies are checked by delivery. Tapping, during pregnancy, should be avoided, if possible, on account of the rapid reproduction of the fluid, and the tendency to peritoneal inflammation. Auscultation seldom affords us conclusive information in the way of diagnosis.

10. *Diminution of Size in the Abdomen.*—This change is peculiarly striking, when the fœtal life becomes extinct, although the ovum may be retained in utero until the full term is expired. "A woman expressed her conviction that she was in the third month of pregnancy. Soon after this time, although she lost every symptom of pregnancy, amenorrhœa excepted, she persisted in asserting its existence. At the ninth month labour came on, which terminated in the expulsion of an apparently three months' fœtus (not decomposed) and a diseased placenta. Not only, however, does the abdomen diminish in bulk when the fœtus is deprived of life, and the blood is in a great measure diverted from the uterus, but also when the vitality of the ovum is unimpaired, and the vessels of the uterus are undergoing a progressive increase."

11. *Fœtal Movements.*—These are the only incontestable evidences of the life of the fœtus—yet these movements have deceived the most experienced practitioners. "When the hand is placed over the gravid uterus, the sensation imparted to it by the movements of a living child varies from mere knuckle-like substances, felt weakly, or passing slowly from one portion of the uterus to another, to that peculiar ictus, or strong and sudden jerk, which is so characteristic of pregnancy."

In consequence of the light and distended state of the abdomen towards the close of pregnancy, no distinct sensation can be felt by the hand, when the body is erect; but when reposing on the back, the movements may be distinctly felt. It is proved by daily experience, that fœtal movements may be simulated by the action of muscles, the presence of hydatids, a slight ovarian enlargement, and other growths and morbid depositions, both solid and fluid—even bodies of air moving about in the intestines are frequently confounded with the movements of the child.

"An involuntary movement of the muscles of the abdomen may be occasioned by any large body within its cavity, irritating the muscular fibre. These movements vary from a mere twitching, to a strong retraction, especially about the umbilicus. I examined a woman having an enlargement of the abdomen, chiefly from fat, in whom these muscular retractions were so marked, that several experienced females would not abandon their conviction of the fact of pregnancy, although the supposed period of gestation had expired upwards of ten weeks. I take it for granted, that twitchings of the recti muscles will generally be more or less painful. An apparently creeping movement, simulating the motions of a feeble infant, and occasioned by large bodies of gas in the intestines, may be distinguished by the hand, notwithstanding the intervention of a considerable substance between the intestines and the abdominal integuments. On one occasion I was greatly misled by these movements. I was desired to see a woman in whom a tumor had become developed on the left of the umbilicus, and on a line with it. It was slightly movable, at times painful, but not on pressure; projecting considerably forward, sloping from its summit, and being about the size of the gravid uterus at the fifth month of pregnancy. Its texture appeared to be firmer in some parts than in others, but this was owing to partial adhesions having formed between the general and uterine peritoneum. It afforded no sense of fluctuation, but on placing the hand over the surface of the tumor, a distinct crawling movement was traced in every part of it, but unaccompanied by the sudden impulse before alluded to. On internal examination, although the os uteri and the vaginal portion of the cervix were scarcely changed, the superior part of the cervix had degenerated into a tumor, quite as large as a child's head, exceeding it in firmness, but without the resilient property of an immature fœtal skull. Repercussion could not be produced. The tumor continued enlarging, the sufferings of the patient progressively increased, and the result was fatal. On examination, *post mortem*, it was found that the inferior part of the uterus had degenerated into a very thick and fibrous, or fibro-cartilaginous texture. The fundus and body of the organ were converted into a large sac, not thicker than an ox bladder, and contained three pints of dark, fœtid, muco-purulent fluid, of the consistence of gruel. The mucous and fibrous structures of these parts of the uterus had nearly disappeared, and the peritoneal coat, though generally thickened, had ulcerated in one spot, where, from its thinness, it burst during the examination, and allowed a part of the fluid to pass into the abdomen. The fluid was prevented during life from escaping into the vagina by a quantity of tenaceous mucus which lined the sides of the cervix uteri, as in ordinary pregnancy."*

---

* "The *post-mortem* examination was made by my friend, Mr. J. M. Coley, of Bridgnorth, who kindly furnished me with a copy of his notes."

The crawling motion alluded to was probably produced by strong peristaltic movements of the colon, felt through a fluid of moderate density—or, otherwise, by the thick fluid in the uterine cavity changing its position when the hand was placed over its attenuated surface. In a few cases, the movements of a living child have not been felt at any period, either of pregnancy or labour. This may depend on an excess of liquor amnii, torpor of the uterus, excessive uterine action, or feebleness of the infant, especially after hæmorrhage. The movements of an infant may be almost paralyzed by the full and unremitting action of the ergot of rye. Our author is very unwilling to administer this remedy, lest a dead child should be the consequence.

"Another source of deception consists in confounding inanimate with animate movements; an accidental change in the situation of a dead fœtus, for example: a woman who was most anxious for a living child, persisted that she felt the child move at the beginning of her labour, and yet the cuticle was entirely detached, and decomposition far advanced."

12. *Auscultation.*—Without any pretension to be an expert auscultator, our author has distinctly detected both the soufflet and the pulsation of the fœtal heart, by the stethoscope and the naked ear. "But the soufflet is common to several diseases, and it is, therefore, an uncertain evidence of pregnancy. The sound will be rendered obscure, when the centre of the placenta corresponds with the centre of the fundus uteri on its posterior surface, and will be scarcely perceptible when the placenta is attached to the uterine orifice." The pulsation of the fœtal heart is, of course, conclusive of the presence of a living child. It is not distinctly heard before the fifth or sixth month—at least our author has not been able to distinguish it before that period. Some concise observations are made on the state of the funis, and on that of the cranial bones, &c. which we need not examine. The paper contains many useful hints and practical remarks, which we have transferred to our pages in an abbreviated form, as beneficial to our readers, and the best compliment we could pay to the author.

---

## THE GUMS, THEIR DISEASES AND SYMPATHIES. By MR. WAITE.

We have heard that Mr. Waite is a scientific dentist, and we have no doubt that he has studied the subject on which he now writes, not only with care, but with the advantage of a general and proper knowledge of medicine in its full extent. We cannot help suspecting, however, that like a physician who has lately published on the same subject, Mr. W. has estimated too largely the influence of affections of the gums on affections of other and distant organs. This error seems almost inseparable from exclusive attention to a single subject in practice, however extended may be the previous study. Mr. W. exhibits classical learning as well as pathological research in this little volume; but we think he is not a practised writer, many of his sentences being obscure or involved. "To the medical world (says he) with all respect to their great exertions and intents, I would submit the teeth as organs most essentially conducive through life to a healthy temperament and digestion." Here we are left in doubt whether Mr. Waite recommends teeth to the doctors, or the study of them. We must pass over a great many sections on the structure and functions of the teeth and gums. At page 59, we have a chapter entitled "the influence of the passions of the mind on the gums." The far greater part of the chapter is occupied with quotations from the poets and others, illustrating the general effects of the exciting and depressing passions on health—such as the story of Sophocles dying as soon as he was proclaimed victor in a dramatic contest, &c. There are only a few lines in this chapter on the gums themselves as participating in the state of the general health. There are other chapters, however, in which Mr. W., keeps more closely to his subject, and offers many useful observations, which we are unable to condense or collect, owing to the loose manner in which the Essay is written. We shall merely offer an extract, as a sample of the matter.

"A change of residence to a damp climate will often rouse up in the gums a great degree of vascularity. In the damp places of England and Ireland, the appearances which the gums present are of a turgid and vascular nature. In the damp countries of France these conditions of the gums run a much greater length from the circumstance of the difference in the constitutions of the two nations. In the damps of Germany and Switzerland persons also lose their teeth early in life, the climate engenders malaria and low fever, enfeebles the powers of digestion, and brings on rheumatic affections with langour and general constitutional debility.

A morbid vascularity of the gums is oftentimes produced by cerebral affections, by close scholastic application, by a state of fear and anxiety in which youths are kept, added to the manner in which they are often made to pore over books by parents who themselves are untaught in the real doctrines of nature.

We have already enlarged on the sympathy between the stomach and the gums, an altered appearance of the one coinciding with the same phenomena which may be distinctly traced to the other; hence dissipation and vice in young persons produce derangement of the stomach; transmitting its characteristics to the gum. The young female emerging from the nursery to the nocturnal scenes of London revelry, is also subjected to disease of these organs, the gums as well as the stomach sympathizing with the state of excitement she is then kept in. Here we may also bring in the man of literature and close application; the tradesman, exposed to hot rooms, and capable of enjoying but little air and exercise; the statesman, borne bown by the trammels of office, with its anxieties and perplexities; the unhappy hypochondriac; and, lastly, the maniac himself.

The period of pregnancy often produces a diseased alteration in the gums, which occasionally loosens and destroys the teeth; this comes on from the unsettled state of the circulation during that important period.

Thus far I have endeavoured to explain some leading facts connected with the diseased appearances of the gums. There remains still another important pathological sympathy which must not be passed over. I allude to a morbid state of sensibility in which they are frequently found; this state is roused in the gums to a considerable extent by the effects of scarlet and other fevers when severe, by the after effects of mercury when given in an oriental country, as also by all circumstances which tend to disease the general state of the nervous system.

I lately witnessed a remarkable case: —A young gentleman had just returned from India, where he had taken mercury to a very considerable extent. He had fallen into a regular state of hypochondriasis; he had sensations every now and then over him of momentary dissolution occurring, and of these he evinced the greatest horror: he dreaded the appearance of a razor, of a knife, or of any instrument which could inflict a wound; his gums had receded from the teeth; their edges were thickened, but of a firm consistency; these were very painful to the touch, as also were the necks of all the teeth where the bony part was exposed. I used my utmost endeavours to persuade him that he would soon be well, and under medical guidance he went into the country. In cases of tic dolouréux, especially in elderly females, the gums frequently possess extreme sensibility. I recollect a lady who was dreadfully afflicted with tic douloureux. Her gums were soft, and it appeared as if most of the capillary vessels in them had sloughed, and that a lymph of a light brown pellucid colour, coinciding with the state she was in, was underneath their surfaces.

Sensibility is also often roused in the gums to a great extent by heat of stomach and cold: it also succeeds the vascular condition, roused by the many circumstances we have considered, which bring on an inordinate circulation through them."

The work will prove useful to the general reader, and is not undeserving of professional perusal.

---

## GERMAN LUNATIC ASYLUM.

"The insulated rock, on which stands the Irrenaustalt, rises abruptly from the plain, and commands a rich and romantic view, bounded towards the south by the peaks of the *sieben gebirge*,—towards the north by indulations over which the towers of Cologne are just discernible,—on the east by a chain of low wooded hills,—whilst, towards the west, the eye is attracted to the wide expanse of Rhine, which flows so majestically amidst gardens and vineyards, spired villages, and ruined castles. At the foot of the rock stands the old town of Sieburg, whose crumbling ramparts are bathed by the Sieg, a mountain torrent that, after meandering a couple of leagues precipitates itself into the Rhine. In the eleventh century, the mountain, or rather craggy hill, of Sieburg was crowned by a castle belonging to the Count Palatine Henry, who presented it to the Archbishop Annon. The latter established there a Benedictine monastery, erecting for this purpose a vast and stately edifice. Napoleon who everywhere appropriated monastic properties to the purposes of the state, expelled the humble Benedictines from their splendid residence: and after the peace, the Prussian government having failed in finding a purchaser, the building was, by a few additions and alterations, converted into an Irrenaustalt, or asylum for the insane of the Rhenish provinces. Nothing can be better adapted to such an institution than the long corridors and separate cells which form the interior of a monastery. The edifice is nearly quadrangular, but its great central court is divided by a noble church, which towers above the rest of the structure. On three sides the ground-floor is almost entirely occupied by the kitchen, baths, and offices; the cells of the first floor are principally devoted to the poor patients, whilst those of the second are inhabited by the *pensionnaires*, or persons of a higher class, who are admitted on terms proportioned to the accommodation which they require. The fourth side of the quadrangle, which offers the advantage of being a little separated from the others, has for its inmates the more restless or noisy patients of all classes, the ground-floor being assigned to the men, and that above to the women. At present there are about two hundred patients, of which only eighty are females.

There is one peculiarity in the moral treatment adopted in this institution, which is especially worthy of notice—the employment of labours, either mental or bodily, as a remedial measure. With this view, a distinction is made as to the habits and relative education of the patients. Of the poorer inmates, the males are, with but few exceptions, employed six hours every day in the cultivation of the gardens and fields which surround the hill; whilst the females either spin or are actively engaged in the domestic arrangements. In their leisure hours, those who are recovering, meet in rooms set apart for society, in which mechanical games, the journals, and works of a light and instructive character are introduced for their amusement. The *pensionnaires*, in general persons of good education, are also called into activity—the ladies to exercise themselves in needlework, reading or music—the gentlemen to pursue literary or arithmetical studies proportioned to their abilities, and adapted to the peculiarities, of their cases. The occupations of both are carefully superintended by well-informed persons of both sexes, the literary exercises being more particularly revised and corrected by the Protestant and Catholic clergymen of the establishment. One gentleman, whom I visited, was translating Cæsar's Commentaries; a second was learning a new piece of music; and a third, observing that I was a foreigner, conversed with me in Latin. The private apartments of the *pensionnaires* are supplied with every necessary comfort, and the courts and gardens afford ample space for recreation and exercise. There is a library, and in the public rooms, billiards, and various kinds of games and musical instruments serve to while away the few hours which are not expressly devoted either to bodily exercise or to study. Idleness is banished, and with it much of the melancholy which is so usually observable among the insane: order, neatness, and industry, reign in every branch of this interesting establishment, the arrangements of which reflect infinite credit on its learned and scientific director, Dr. Jacobi."*

## MEDICAL PROBLEMS. By DR. GRIFFIN.

### ENTERITIS.

In our Dublin contemporary for January last, Dr. Griffin, whose work we fully reviewed in our last number, has published a lengthy paper on the nature and treatment of enteritis, which we deem worthy of notice in our Periscope. The gist of the inquiry bears on the propriety or impropriety of purgatives in enteritis. The evidences of various authors, from Parr to Armstrong and Abercrombie, are adduced, compared, and contrasted. A case is then detailed, which is as follows, though much condensed.

A lady, aged 32, was attacked in the evening of November the 1st, with pain in the lower part of the back, and weariness, which three glasses of Port wine did not relieve. She was feverish in the night, and next morning had a dose of castor oil. At 3 P.M. she had severe pain in the stomach, and the whole of the abdomen was found to be tender, and somewhat tumid. She was hot, restless, and exhibited a painful expression of countenance. The castor oil had operated freely three times. She was placed upright,—a vein opened, and eight ounces of blood abstracted, when she fainted. She was then placed in the horizontal position, had some warm drink, and again bled to two ounces, when syncope supervened. Twenty-four leeches were then applied to the abdomen, especially to the parts most exquisitely tender. A dose of calomel and opium (3 grs. of one, and a half of the other) was given, and a dose (2 grains to one) to be given every second hour afterwards. In the morning of November 3, the pain still continued very severe, and the tenderness exquisite. Twenty ounces of blood were taken from the arm, without faintness. The bowels being unmoved since after the castor oil, and the abdomen somewhat tumid, pills of aloes and hyosciamus were exhibited, and a lavement thrown up, containing some oil of turpentine.

"On administering this last she was seized with a dreadful forcing or bearing down pain in the anus, and passed nothing; the pain seemed as excruciating as any that could occur in violent labour; lasted for about twenty minutes, and was then relieved by the warm bath. In two hours afterwards a simple injection of oatmeal tea was given, followed by similar suffering, and was in like manner retained. The permanent pain was at this period severest in the left iliac region and about the navel, where the tenderness on pressure was extreme; the countenance was more anxious; the tumidity of the abdomen was increasing, and the stomach beginning to reject the drink. In consultation with Dr. Geary, Sen. to whose judgment on these occasions I have been often indebted, it was now agreed to take blood again, and eighteen ounces more were drawn, being the third general bleeding within twenty-four hours. Two grains of opium and a grain of calomel were given immediately after, and ordered to be repeated every two hours through the night."

There was considerable amendment next morning, the 4th November. The pain and sickness had subsided—the injections had come away, with thin feculent matter. Still there were some unpleasant symptoms remaining, and two grains of opium, without calomel, were given, every two hours. In the evening, the symptoms were still more favourable, and she spent the night, and the following day (5th Nov.) with little uneasiness—but she mentioned at one time that fæces were passing from the rectum. This circumstance was not attended to, and the opium was ordered every fourth hour. She had taken 32 grains within the preceding 32 hours, without stupor or head-ache.

---

* Athenæum.

"On the next evening, as she lay on the sofa while her bed was making, she felt a solid substance passing from the rectum, which alarmed her terribly. On examining, I found a rope of sloughy stuff, soft and purulent outside, but tough and fibrous within, not unlike the ischiatic nerve in a decayed state, hanging from the anus for the length of a foot or more. On attempting to draw it away, it appeared to be still adherent within the gut, and she complained of pain. After a little, however, it was removed without much effort, and a gush of matter to the amount of perhaps two table spoonfuls followed. The slough was about the thickness of the thumb, or more, and was fifteen or sixteen inches in length. We at first supposed it was a portion of the small intestine which had mortified, and been thrown off; but on close examination no distinct traces of a canal could be found. Sometime after an injection of warm water and sweet oil was administered, which came away in about twenty minutes mixed with some matter, but without any appearance of fæces. I now introduced the finger into the rectum, and felt at the posterior part, close to the sacrum, a rugged irregular edge, as if it was the termination of the part from which the slough had been cast off: the examination gave much pain, especially when I pressed within upon the intestine. Several days passed without much alteration in the case, there was matter daily discharged to the amount of three or four ounces, and there was at times severe dysury, at last demanding the use of the catheter. The urethra was blocked up with a thick mucous discharge, which closed the common instruments, and prevented the waters escaping until a very large-sized flexible one was introduced. Sometimes the difficulty appeared to be connected with mere nervous irritation, as she occasionally got sudden and unaccountable relief, the water coming off without any very obvious reason. Three days had now elapsed since the subsidence of the pain and tenderness of abdomen, and six days since the bowels had been moved. There appeared to be some fulness of the abdomen, and she began to feel uneasiness again in the left iliac region; we had allowed the bowels to remain so long at rest with a view to the healing of the ulceration in the rectum, and from an apprehension, that much disturbance of the intestine might increase the inflammation and sloughing."

A dose of castor-oil was given, followed by pills of aloes and henbane, which operated freely in the course of the day (Nov. 8th,) the motions being thin, dark, and streaked with matter. The pain in the left iliac region became alarmingly increased, and extended rapidly over the whole abdomen, with a return of the restlessness and distress of countenance, sickness, &c. The pulse became feeble and rapid—thirst extreme—belly tense—countenance sunk—face covered with cold perspiration. In this distressing dilemma, it was determined to trust to opiates, as general depletion was out of the question, and purgatives might increase the evil. Three grains of opium were given for the first dose, and two every two hours afterwards. Twelve leeches were applied to the abdomen, with fomentations, &c. "The effect was wonderful; the pain and tenderness gradually subsided—the vomiting ceased—the pulse became slower—and she got some sleep." The amendment went on for the ensuing five or six days—excepting some dysury, and the continual draining of matter from the rectum, with pain and soreness inside the sacrum. After the 9th, the opium was gradually diminished. The appetite returned, and the tongue became clean. After seven days without an evacuation, the left iliac region became painful, with feverishness, and disposition to vomiting. An opiate was first given, and followed by calomel, with mild doses of castor-oil and jalap, until the bowels were freely moved. Great relief ensued, and the abdominal tenderness finally subsided. Still there was much to be apprehended, after a slough of fifteen or sixteen inches had been detached. A mild purgative was given every fourth day, while opiates were given in the intermediate periods. At the end of three months she could move about the room, and, at the termination of the fourth month, she was perfectly recovered.

It will be evident to our readers, that the foregoing case will not afford many data for grounding principles of general treatment, in acute and simple enteritis. Sloughing of the rectum, and most probably of the sigmoid flexure of the colon, is not an every-day occurrence. Dr. Griffin, however, thinks that the case in point bears strongly on the general principles of treatment, in respect to some particular items—as purgation and mercury. As to blood-letting, we shall be brief. We agree with our author, that the precept of placing the patient in the upright posture, in order to induce early syncope, is more than doubtful. We conceive it to be erroneous and dangerous. It is not mere syncope which arrests an inflammation of the intestines or other internal organ—it is the detraction of blood from the whole system, as well as from the part inflamed, so as to withdraw, as it were, the basis on which the phlogosis is founded. Before that condition is attained, syncope only interrupts, instead of accelerating, the means of cure. It is pretty evident that it did so in the foregoing case, and we have often seen the same effects produced by the same means.

The chief point of discussion hinges on purgation in enteritis. Dr. G. admits it as an undeniable fact, that—"in a great number of cases of enteritis, the salutary termination of the complaint has been by free evacuations from the bowels, and that, before this occurs, perfect relief is seldom obtained." But on the other hand, he observes that, as some cases occur in which the complaint goes on to a fatal termination, the bowels being free all the time—while others, again, as the case just detailed, admit of perfect relief, though the bowels are locked up for several days—we must pause—and, perhaps, come to the conclusion, that we are mistaking effects for causes—in other words, "that patients recover, not because they are purged—but they are purged because they recover." There is probably more point than propriety in this sentence. But we will not enter fully into a consideration of Dr. Griffin's advocacy of opium, and rejection of purgatives, after bleeding in enteritis. The plan was tried, in consequence of Dr. Armstrong's paper, and it did not answer fully the expectations of that talented, but somewhat enthusiastic physician. If depletion, general and local, has so far reduced the entiritis that irritation *only* remains, why then the opium alone will answer the object in view. But if any inflammation be left behind, the opium, by itself, and especially in such doses as are recommended, will mask the enemy, increase the constipation, and jeopardise the life of the patient. But if we subdue, as far as possible, the enteritic inflammation, and then combine calomel with the opium, we are securing a safe evacuation of the bowels, while we are allaying their irritability. We advocate as little as Dr. Griffin does the employment of mere purgatives in the early stage of enteritis; because we know that they will generally fail in opening the bowels, and may do harm by increasing the peristaltic motion. But we do advocate the administration of calomel and opium immediately after free depletion, and, after a reasonable lapse of time, the exhibition of castor-oil or other mild purgative, aided by emollient lavements. We know, by a tolerably wide range of experience, that this is a safer practice than that of large doses of opium after bleeding. Dr. G. talks a great deal about the danger of "*stimulating* the inflamed parts, or the parts contiguous," by purgatives. What! does Dr. Griffin pretend that calomel, applied to the mucous membrane of the stomach and intestines, act merely as a "*stimulant?*" Accurate observation would teach him that it acts more as a *sedative* than as a stimulant; and, by increasing all the glandular secretions, and removing the contents of the intestines, whether healthy or vitiated, it removes one of the worst of stimulants. We are surprised that Dr. Griffin, for whose professional acumen we entertain a high respect, as our readers are aware, should thus condescend to play upon words, and pervert their fair meaning.

"Is it absolutely true that we can *violently stimulate* a mucous surface which is healthy, in connexion with a muscular or serous that is inflamed, without increasing the inflammatory actions in the latter?"

This passage is applied to calomel in enteritis!! A *violent stimulus!* why he could not say more, if we exhibited bumper after bumper of whiskey to a man labouring under enteritis! On cool reflection, Dr. Griffin will see the impropriety of the terms which he has used on this occasion. It is vain to bring in perforations of the intestines, as exemplifying the good effects of opium—for, in such cases, we can do nothing but soothe the sufferings of the patient.

We would just hint to Dr. Griffin, in conclusion, that the case of the lady, above detailed, does not hold out the most flattering picture of the beneficial effects of the treatment recommended. For our own parts when called to a case of enteritis, we should not like to compound for a slough of the rectum and colon, "the length of a foot or more, even with the assurance that opium and constipation of the bowels would ultimately preserve life. By this observation, we do not mean to find fault with Dr. Griffin's practice in the particular case, believing sincerely that it was highly judicious. We only mean to enter our protest against the general adoption of the plan recommended—and against the conclusions which Dr. G. has drawn from the case in question.

---

## INJURIOUS EFFECTS OF SALT. By W. MATEER, M.D.

[Dublin Journal.]

After adverting to the many unfounded and ridiculous notions entertained by our forefathers respecting the salubrity and insalubrity of culinary salt, as an article of diet, Dr. M. proceeds to give us the result of his own observations as an out-door visiting physician of the Belfast Dispensary.

"As not only the really poor, but also the working classes, apply for relief, such cases are very numerous. Those which fell under my notice presented a striking uniformity in their symptoms. Nearly one-half of the adults complained of the same kind of indisposition. The symptoms so generally complained of were great weakness, lassitude after any ordinary exertion, a feeling of soreness through the whole body, and a sensation at the region of the heart, which the patients themselves differently described, as a 'crushing,' 'tearing,' and 'gnawing' at the heart. There were also palpitations, stitches through the chest, with a catching cough, dyspnœa in a greater or less degree, and costiveness of the bowels. The appetite was, for the most part, unimpaired, which sufficiently distinguished this complaint from dyspepsia; neither was there present flatulency, or the burning and acidity of the stomach, which characterize this disease. The stitches in the chest, and short cough (when present) might readily have caused them to be mistaken for some affection of the chest, but the feeble pulse, the shifting of the pains, and the existence of other symptoms proved that they were merely sympathetic.

These complaints were found only among the lower classes, the higher being, as far as my observation has extended, quite exempt from them. This circumstance would naturally lead us to refer their origin in some deficiency in cleanliness, clothing, or diet. There are none of these circumstances which mark the difference in the conditions of society, so much as the nature of the diet. In the case of the poor, it consists in a great part of salted provisions, which are but sparingly used by the rich."

These facts induced our author to attribute the symptoms above-mentioned to the inordinate use of *salted provisions*—and we are inclined to agree with him in a great measure. We conceive that the above symptoms result from want of nutrition, in consequence of the indigestibility of the food thus hardened and preserved by means of salt. We are disposed to think that if flesh, fish, &c. could be preserved and rendered hard and difficult of digestion by any other material than salt, the same or nearly the same train of symptoms would be the result. This reasoning is not subverted by the statement that—"the entire disuse of salted provisions, and a diet of fresh vegetables and flesh meat, continued for some time, always afforded relief." It is well known to those who have served on foreign stations during the late war, that ships' crews coming into port affected with scurvy, were soon cured by plenty of fresh meat, *independent of vegetables*, and eaten with abundance of salt. In short they recovered much sooner from scurvy, when on exclusively a fresh meat diet, than on one exclusively vegetable. In the physiological and pathological reasonings of our author on this subject, we cannot entirely agree, inasmuch as he looks too much to the mere action of *salt* on the constitution, and too little to the deleterious effects of *salted*, and consequently *innutritious and indigestible food*. Nevertheless we return him thanks for his communication.

---

## CASES OF UTERINE INFLAMMATION.

By FLEETWOOD CHURCHILL, M.D.

[Dublin Journal.]

Two cases are detailed in this short paper—one of them very succinctly.

*Case* 1. "Mrs. M'Quillan, æt. 45, lymphatic temperament, was taken in labour, May 20, 1834. The pains were tolerably effective during thirty hours, and then became irregular. The head of the child presented in the first position; it descended into the pelvis, and there remained unaffected by the pains during the succeeding eight hours. As the difficulty appeared to arise from feeble and irregular uterine contractions, ergot of rye was ordered. She took three doses, each containing a scruple, at intervals of half an hour. At the time the first dose was given the pulse were ninety-six: in six or seven minutes they fell to sixty-nine, accompanied by a feeling of faintness; before the expiration of half an hour, they rose to the former standard; this depression and subsequent rally were repeated with each dose. The fœtal heart was distinctly heard after the labour had lasted twenty-four hours, and more feebly an hour previous to the exhibition of the ergot. The uterine contractions were increased considerably in frequency, and slightly in form by the ergot, but no effort was produced upon the progress of the child; and in consultation with Dr. Darley and Dr. Maunsell, it was determined to proceed to deliver, as the woman was evidently losing ground. Her pulse had become very quick and slightly irregular, and fever was setting in. The catheter had been passed several times during the last thirty-eight hours, but the bladder contained scarcely any urine, notwithstanding the quantity of fluid taken. I introduced the forceps antero-posteriorly in the usual manner, and with some effort delivered the patient of a dead child, without accident. On examining the state of the after-birth, the cord separated, and on the occurrence of some draining, it became necessary to remove the placenta. The pulse at the termination were 130, and the general condition of the patient was far from favourable. However, she seemed gradually recovering for three days, when she was attacked with a violent inflammation of the womb, and an unhealthy superficial sloughing of the vagina and external parts, accompanied with fever of a typhoid type. Pulse 130, and weak. Tongue dry and covered with brown fur. Sordes about the teeth and lips. Skin hot, great thirst; distressed countenance; pain in the belly. The uterus could be felt enlarged and hard, and pressure on the abdomen gave no pain until I felt my finger touching the uterus. Leeches were applied to the abdomen, and stupes. Vaginal injections of tepid water every two hours. Solution of acetate of lead to the vulva. Calomel and opium in large doses. Catheterism was performed three times a day. She continued in this most unfavourable state with but little change for about ten days. A blister was applied to the abdomen. The calomel was omitted as it produced diarrhœa, though fortunately the mouth became affected.

The other remedies were continued sedulously. Towards the end of this time a quantity of fetid purulent matter was discharged from the uterus, which diminished in size and became less tender. The slough of the vagina assumed a more healthy appearance, and the fever decreased until about a fortnight after the operation, when I found her one morning in a state approaching to collapse. Skin cold and clammy; pulse 100 and very feeble; extremities cold. Wine and sulphate of quinine were now freely given, with warm applications to the skin, and after a little time she rallied, and has since gradually recovered. The abdomen is insensible to pressure! a healthy white discharge continued for some time from the uterus; the sloughing of vagina and vulva healed; her pulse fell; her appetite returned, and she is now convalescent though very feeble. I fear the abstract I have given of this case is almost too short to convey an accurate impression of the violence of the attack, and the struggle of the constitution to resist it. I never saw so bad a case continue so long almost hopeless, and yet recover. There are several points of great interest which I would merely point out. I do not know whether it has been frequently noticed by others, at least it has never occurred in the practice of the Wellesley Dispensary, that we have seen a patient so long in labour, drink freely, and yet the secretion of urine so completely suppressed. The catheter was passed three times in thirty-six hours, and not more than two ounces of urine drawn off. The effect of the ergot was very striking; the immediate consequence was a sudden depression of the heart's action, followed by excitement. I have known it produce excitement before even to delirium, but I had not perceived the previous sinking of the pulse. I hope soon to be able to lay before the profession a more extended series of observations on this important subject.

I may observe 'en passant,' that Dr. Collins, the late distinguished Master of the Lying-in Hospital, mentioned to me in conversation, that he has noticed a similar depression in all cases in which he has given it. Are we to attribute the death of the child to the increased pressure exercised upon it by the uterus when stimulated into more frequent action by the ergot of rye? I have before noticed, in a report of the diseases treated at the Wellesley Institution for Females, the important assistance to our diagnosis between puerperal hysteritis and puerperal peritonitis, afforded by the tenderness on pressure. In the former it is caused *only when the fingers are felt to come in contact with the enlarged and hardened uterus;* the abdomen generally being free from pain. In the latter the tenderness is diffused and nearly equal in every part of the abdomen. As to the treatment, without diminishing the value of ordinary antiphlogistic measures, I would notice specially the advantage of repeated vaginal injections of warm water, and the exhibition of opium, either alone or in combination with calomel. It is well if the mouth can be affected, but if not, or if diarrhœa supervene, I should rely with much confidence on large and repeated doses of opium as recommended by Drs. Graves and Stokes. During the attack, I am sure the patient took nearly two scruples of solid opium without any ill effect, and with most decided benefit."

The second case, is very brief, and was published in Dr. Ryan's Journal for January, 1834.

"On the 6th of February last, I was called upon by my friend Dr. Houghton, to visit a poor woman, Mrs. Cooney, Bass-place. She had been delivered two days, after a natural labour, and had taken cold. She complained of pain in the lower part of the abdomen. The enlarged and hard fundus of the uterus could be felt higher than natural, and pressure on this gave acute pain. The abdomen was unaffected by pressure. Pulse 120 and very weak; tongue brown and dry; sordes about the teeth; great anxiety and weakness; skin rather hotter than natural; bowels free; lochia suppressed. I ordered her a blister to the abdomen, with stupes, and gave five grains of calomel, and one of opium, every two hours. She continued in the same state several days. The mouth was not affected: the calomel was omitted, and opium given alone, in one-grain doses. She then gradually became better; a slight discharge of puriform matter took place, succeeded by the lochia. The uterus diminished in size and became less painful; the pulse fell, and the tongue appeared more natural; she gradually recovered, and is now well. Although this cannot be compared for severity with the former case, still the symptoms of uterine inflammation were very decided, as was also the relief afforded by the opium."

Since the above cases were written, another case of metritis occurred to our author, in which the uterine tenderness, and the benefit derived from opium, were equally well marked.

## Practical Observations on Cholera.

By Mr. Henry George.

Although we entertain very few fears of cholera returning in any formidable degree to this country, yet we are bound to notice, in a concise and cursory manner, any statements that may issue from respectable sources, and bear upon the treatment of that mysterious epidemic. We may, in limine, remark, that Mr. George (a respectable medical practioner in Kensington) considers the malignant cholera with which we have been lately visited, as a disease " closely resembling that which prevailed two centuries ago in our own island," as described by Sydenham, Etmuller, and others. In respect to the treatment of cholera, the gastric irritability is one of the most formidable symptoms.

" There is no medicine with which I am acquainted, so capable of controlling this irritability of the stomach, as the liquor potassæ given in considerable doses; I have generally administered it in the following form.

> ℞. Liq. potass. ʒj.; Conf. opiat. ʒss. Tinct. card. c. ʒij; Aq. puræ ℥jss. suf. Mist. cap. dim. stat. et post horam unam repet.

And where the irritability of the stomach has been so excessive as not to bear even that quantity of liquid, I have usually given a tea-spoonful of the mixture every four or five minutes, until the urgent symptoms were abated; nor has such an effect ever failed to follow its diligent use, for it was reflection on the only fatal case of cholera which occurred in my own practice* that induced me to experiment with the medicine; but I do assert that I feel more anxious to support the principle of treatment than to insist on the exclusive employment of the remedy, useful as I have found it; for where I could not obtain the liq. potass. I have administered, even in very distressing cases, a table-spoonful of burnt brandy every few minutes with the happiest effect."

On the reaction we need not dwell. Our author entertains some peculiar opinions on this point. He does not consider this reaction in the light of fever, but as a constitutional tumult or disturbance to be treated by stimulants, opiates, and tonics. We cannot say that our own observations have led us to the same conclusion.

---

* " There was (independent of the case alluded to) an infant whom I attended and rescued by its use, from a state which appeared to threaten its immediate dissolution. A physician was consulted, and the opinion given, (in which I cordially agreed,) was, " that there was nothing but debility to contend with anticipating recovery;' but the cretaceous powder with opium, kino, &c., was ordered, and the wine was discontinued; *vomiting* followed, and in a few hours the child was a corpse."

### RENAL DISEASE.

Some cases have lately occurred in our own practice, which have led us to reflect a good deal on the insidious approach of renal affections, their proneness to imitate complaints in other parts than the kidneys, especially in the bladder and urethra—and lastly, the slow but fatal character of the disease.

One of the cases that particularly attracted our attention, was a gentleman turned of 50 years of age, who had, for some years past, complained occasionally of pain and uneasiness in the region of the liver, with the usual symptoms of what are termed biliary obstruction, as yellow tinge of sclerotica,high-coloured and lateritious urine, pale fæces, and general irritability, white tongue, &c. These symptoms always gave way, without difficulty, to the usual means. In the month of August, 1834, while we were on the Continent, this gentleman was seized with a new train of symptoms—the chief of which were, frequent inclination to make water, with dull aching pain extending from the neck of the bladder along the urethra, to its extremity, where the pain resembled that produced by calculus in the bladder. To these symptoms were soon added a muco-purulent deposit in the urine. The state of the general health varied much, but he never distinctly referred to the region of the kidneys as the seat of any pain. He was frequently examined with this view, but without our being able to trace the disease to any higher source than the bladder. Sir Benjamin Brodie saw the patient in December, and, as the symptoms resembled those of calculus in the bladder, the patient was sounded, but no stone found. The urine was analyzed, and a very slight trace of albumen was discovered, when boiled in a spoon. Under general treatment and regulated diet, the health greatly improved, but the local symptoms never gave way, nor the muco-purulent deposit in the urine. He got so much better, however, that he ate his meals with good appetite, took his few glasses of wine, and said he was as well as at any period of his life, were it not for the pain at and after making water. This pain lasted from half an hour to three or four hours after each evacuation. In this state he was suddenly seized with violent pain in the region of the liver, extending over the front of the abdomen, with fever, vomiting, and, in short, all the symptoms of peritoneal inflammation. The most active depletion, general and local, was employed; but enteritis was clearly established, and, on the fourth day he died. The following were the appearances on dissection, as verified by Sir B. Brodie, Mr. Bagster, and Mr. H. J. Johnson, one of the editors.

*Dissection.* On opening the abdomen there was considerable effusion into its cavity, of a liquid resembling a mixture of serum and bile. The convolutions of the intestines were also glued together by recent lymph. There appeared to be a minute ulcerated aperture in the gall-bladder, which, allowing the escape of bile, had given rise to the peritoneal inflammation. There were biliary calculi in the gall-bladder.

The urinary apparatus was carefully examined. The bladder and urethra were quite sound.

The right kidney was more vascular than natural, soft, its capsule very readily separable from its surface, and the mucous membrane of the infundibula and pelvis of the ureter vascular also.

The left kidney was still more decidedly affected, for, in addition to the marks of chronic inflammation observed in the right, the pelvis and some of the infundibula were much dilated, a calculus was situated in one of the latter, and an encysted cavity, containing puriform fluid, was found in the substance of the organ.

We do not mean to say that this case is very singular, much less that it is unique; but we believe that it is not very common to find *all the symptoms* where there was no disease—

*all the disease* where there were no symptoms. In a discussion at the Westminster Medical Society on this point, it was urged that such cases were by no means uncommon, and Mr. Howship's work was referred to as proof of this position. The two following cases were urged as being perfectly conclusive on this point.

CASE 1. "*Ulceration, with Calculi in the Kidneys.*[*]

Catharine Harwood was admitted into the Westminster Hospital, Aug. 7, 1765. She came in reported with stone, and was under Mr. Pyle's care. There was a suppression of urine occasioned, as was supposed, by a stone or stones in the bladder; but on examination none were found; while in the hospital she in general passed but little water, yet on introducing the catheter upon one occasion as much as half a pint was found. She remained much in the same state for a fortnight, and died on the 21st of the month.

*Examination.* In the abdomen all the viscera appeared sound except the kidneys, and here was the source of *all her complaints*, as well as the cause of her death.

Both the kidneys were in a soft, and almost putrid state. They were very much enlarged. In the pelvis of the kidney upon the right side, was a triangular knotty stone, one angle of which had passed through a small ulcerated hole in the pelvis, and appeared externally. The pelvis of the kidney was exceedingly thin and tender round the part where it had given way.

Lodged in the infundibuli of each kidney calculi were found; in the cells of the right were several small stones; in those of the left there was a great deal of sabulous matter, but only one stone that had reached the size of a pea. The ureter of the left kidney had several small calculi in it, for some distance down. These were not larger than small pepper corns.

In the bladder was a small quantity of sabulous matter, adhering loosely to its internal coat. Otherwise the bladder was healthy, being neither inflamed nor contracted.

The opening made by the stone through the pelvis of the kidney, must have allowed the urine to escape into the cavity of the abdomen, and thus have hastened the fatal termination of the disease."[*]

Without wishing to question the truth of the foregoing statement, it will not be denied that the case is exceedingly imperfect as to the history—of which, in fact, there is no detail whatever. It is merely an *extract* from a manuscript of Mr. Heaviside's, and there is much reason to believe that if all the symptoms of the case had been narrated, some of them would have had reference to the region of the kidneys before the death of the patient. We shall, however, let that pass.

*Case* 2. The next case related by Mr. Howship is that of a boy, five years of age, whose symptoms were those of stone in the bladder, and for which he was sounded, when a stone was found. In this case, "the fits of pain and distress, *which usually commenced in or about the loins*, passing *downwards towards the bladder*, still continued to return as frequently and severely as ever, reducing him both in flesh and strength, till at length a fresh attack of excruciating pain and irritation supervened, and excited fever. He now complained of great pain and excessive tenderness over the whole abdomen. He soon sunk."

On dissection, a quantity of purulent matter mixed with urine was found in the abdomen, and which had escaped from diseased kidney. The bladder was much thickened in its coats, and contained a calculus.

In this case it does not appear that disease of the kidney was suspected; but it cannot be maintained that no symptoms indicative of such disease presented themselves during life. At all events, as there was disease in both parts of the urinary apparatus, it is impossible to say which had the priority, or which excited the sympathy of its neighbour. The following case, however, is more to the purpose.

---

[*] "Extracted from a MS. of the late Mr. Watson's; which together with the disease, is preserved in Mr. Heaviside's museum."

[*] Howship, p. 40.

*Case* 3. "In 1794, I was sent for to see a young lady, Mrs. P——e, who had been married about a year. She became subject about five months previous to my seeing her to an irritation at the neck of the bladder. She had a very frequent desire to pass her water, night and day, the urine depositing a great quantity of thick mucus. These complaints she imputed to having taken cold during menstruation, which suddenly ceased, and never returned.

The disorder continued for six weeks, in spite of opiates, and other rational means. At this time however it suddenly left her, upon the coming on of a pain in the back, with which she was suddenly attacked. This pain was constant, and was situated in the region of the right kidney. A few days subsequent to the commencement of the pain, a tumor appeared upon the part, and continued gradually to increase, extending forwards towards the region of the liver. This gradual increase of the tumor externally went on for about two months.

In this stage of its progress, I was called upon, and found a large tumor in the region of the liver, very hard, very extensive, and in some parts evidently containing a fluid.

I said this seemed to have been *one of those cases I had sometimes seen, wherein the disease had never existed in the part where the first symptoms had appeared.* That I conceived she never had any disease in the bladder, but a symptomatic action from an original affection in the right kidney, which perhaps might have suppurated, and during the inflammatory stage, it had probably formed an adhesion to the liver, so as to point through that viscus."

We think it very probable that the original symptoms in the bladder were symptomatic of disorder in the kidney: yet we have no *certainty* that such was the case. Irritation may have been *transferred* from the bladder to the kidney, as we know it often is, from one part of the urinary apparatus to another. From the passage which we have quoted in Italics, it seems that Mr. Heaviside had sometimes seen cases where "disease had never existed in the part where the first symptoms had appeared;" though it is not quite evident that this expression applies exclusively to the urinary organs, but to other parts also.

Such occurrences as those detailed in the case noticed by ourselves, are certainly not very numerous, and are rather the exceptions than the general rules. Sir B. Brodie has not been able to verify more than two or three such instances, as appears from his valuable work.

The second case which we have to state was that of a lady about 33 years of age, who had been affected for about two years, with dull pain in the perineum, anus, and region of the sacrum, accompanied by an irritable state of the bladder. The urine did not present, for a long time, any thing extraordinary. About six months before her death a muco-purulent deposit appeared in the urine, and then the pain in making water became very severe, lasting for a quarter or half an hour after each evacuation, and appearing to be in the neck of the bladder and along the meatus urinarius, to the very extremity of the passage. These symptoms very gradually augmented in severity, and her general health began to decline. She wasted in flesh, got progressively weaker, and a very slight exertion brought the pulse up to 120 in the minute. She was carefully examined by Sir B. Brodie, Sir C. M. Clarke, Dr. Robert Lee, Dr. Prout, Dr. Johnson, and others; but no indication of any disease of kidney could be traced beyond the symptoms above-mentioned, and which referred to the bladder and urethra. The regions of the kidneys were repeatedly and carefully explored; but no pain, tenderness, fulness, or other phenomenon indicative of disease could be detected. The urine betrayed slight evidence of albumen, besides the muco-purulent deposit already mentioned. The uterus was perfectly sound, but the coats of the meatus felt somewhat thickened, and the neck of the bladder, on the right side, was tender when pressed upon by the point of the finger. No medicine appeared to have any decided effect on the complaint, and the unfortunate patient declined progressively in health and strength, having lost all appetite, and being affected with a kind of hectic fever at night. A few weeks before her death, all doubt was removed, in respect to disease being in the kidney or neighbourhood. The region of the right kidney and the hollow of the right ilium became the seat of exquisite pain and tenderness, as well as some fulness—the muco-purulent discharge changed into extremely fetid pus, and became greatly increased in quantity, the symptoms of pain in making water, and frequency of micturition continuing the same as before the apparent affection of the kidney and iliac region was developed. From the pores of the skin a clammy perspiration exuded, which had a heavy and disagreeable odour. Hectic fever became established, and the patient died. On dissection, the right kidney was found to be extensively diseased—a large abscess in the right iliac fossa—the coats of the bladder thickened, and the mucous lining ulcerated. There was no calculus.

---

## DENTOLOGY.

1. THE ANATOMY, PHYSIOLOGY, AND DISEASES OF THE TEETH. By THOMAS BELL, F.R.S. Second Ed.
2. DENTOLOGIA: A POEM ON THE DISEASES OF THE TEETH, &c. By SOLYMAN BROWN, A.M, New York, 1833.

These two works are each classical in its way. The first on the list has been stamped as such by public approbation—being a practical work on the anatomy and diseases of the teeth, grounded on the present advanced state of our knowledge—and that from the pen and from the experience of one of our most talented lecturers on dental pathology. It is curious that Mr. Bell has prefixed no preface to this second edition, and assigned no date to that of the first. We are, therefore, left in the dark, as to the additions or alterations which the work has undergone. We conclude, however, that no additions, with the exception of one or two notes, have been made to the present edition. In the 11th vol. of this Journal, Nos, 21 and 22 (July and October, 1833), we gave a full analysis of Mr. Bell's work, and spoke of it as it deserved. On the present occasion, therefore, we can only announce a second edition, without additions. We shall, however, extract an interesting case, introduced (we believe for the first time into this edition) in a foot-note from his friend Mr. Morgan, the distinguished surgeon of Guy's Hospital. It is given in illustration of local neuralgia, as distinguished from constitutional neuralgia, and is both curious and interesting from the circumstance, that the exciting cause of the disease was temporarily removable at the will of the patient.

"The subject of the disease, by trade a tailor, of apparently sound constitution, and between fifty and sixty years of age, was placed under my care as a patient in Guy's Hospital, in the month of May last. He was at that time suffering from the effects of entropion in both eyes. In the left eye, the disease was producing but trivial inconvenience, whilst in that on the right side, the suffering was extremely severe, and of an unusual character. The account which he gave of the commencement and progress of his complaint was as follows:—

About six years ago, after a severe attack of ophthalmia, which was accompanied by very considerable swelling of the lids, the tarsi became inverted. In consequence of this, the distressing symptoms usually met with in cases of entropion supervened. For the relief of these symptoms he placed himself at different periods under medical treatment, but without receiving any permanent benefit from the remedies which were made use of. The formation of a slough by the application of caustic to the under part of the lower lid, and the subsequent excision of a portion of the orbicularis palpebræ, were operations to which he submitted without experiencing any beneficial result.

Until within the last two years, the symptoms which he describes, are simply those of severe entropion; but about this period a peculiar neuralgic affection was added to his other sufferings, which constitutes the principal point of interest in the case; it consisted, to use his own expression, in a 'ticking, flickering, darting pain,' which occurred occasionally during the day, and was constant when in the recumbent posture. This pain was altogether different from any which he had ever experienced before, and extended from the lower lid and globe of the eye on the right side, over the forehead, right temple, along the lower jaw, down the side of the neck and arm, to the right elbow, and occasionally also as far as the wrist.

These occasional neuralgic affections were existing in the highest degree of severity at the time he placed himself under my care; and, at this period, the cornea of the right eye was rendered partially opake and highly vascular, by the constant pressure of the inverted lid; there was severe conjunctival inflammation, and the intolerance of light was excessive.

The inversion of both lids of the right eye was considerable, the lower lid being somewhat more inverted than the upper; and the connexion between the entropian of this part and the singular nervous affection which I have mentioned, was clearly proved by the circumstance, that even in the most severe paroxysm of pain, a separation of the lower lid from the globe, produced at all times a temporary and instant relief.

It appeared to me, therefore, that the removal of the cause of his sufferings might be effected by the excision of that portion of the cartilage of the lower lid, which, by its pressure, was keeping up, if not producing, morbid excitement in the nervous system. I therefore removed about two-thirds of the inferior tarsal cartilage, by cutting out a triangular central portion of the lid. The result of this operation, however, disappointed my expectations; for, although temporary relief was afforded, yet the remaining portions of the tarsus were found, after the healing process had been completed, to produce the former train of symptoms, in consequence of their contact with the globe. I then removed, by excision, the whole of the inferior tarsal cartilage, and produced for a time a complete alleviation of his neuralgic complaint. In the course of about six weeks, however, the disease returned with its former severity, and was now referred to the inverted condition of the upper lid; for the paroxysms were invariably and instantly stopped by a separation of the superior tarsus from the eye-ball. The tarsal cartilage of the upper lid was therefore dissected completely out; and the operation, which was performed about six months ago, has hitherto been attended with complete success as regards the removal of the neuralgic affection. I should also mention, that soon after his first admission into the Hospital, the extension of pain along the lower jaw during the paroxysms, was entirely prevented from recurring by the extraction of three carious molar teeth on the same side. At present, the man is suffering from chronic ophthalmia in the right eye, and from entropion in the left. Previous to the excision of the tarsi, the constitutional remedies which are occasionally found beneficial in cases of tic douloureux were tried without avail.

Yours, ever most sincerely,
JOHN MORGAN."

The second work on our list is partly from the pen of a transatlantic poet, and partly from that of an ingenious dentist (Mr. Parmly), who resided and practised for some years in this metropolis. Although the extensive subject of HEALTH generally, afforded ample scope to the muse of an Armstrong, we had little idea that DENTOLOGY would have furnished materials for an epic poem, in five cantos, by a reverend divine of the New World. Yet such is the fact; and if we cannot conscientiously place Mr. Brown on a par with Armstrong and Darwin, yet we should not be fair in withholding from him the meed of praise, for some power in versifying the unruly tortures of toothache, and the technical terms of filling, filing, and extracting decayed teeth.

> "Whene'er, along the ivory disks, are seen;
> The filthy footsteps of the dark gangrene;
> When caries come, with stealthy pace to throw
> Corrosive ink spots on those banks of snow—

Brook no delay, ye trembling, suffering fair,
But fly for refuge to the dentist's care.
His practised hand, obedient to his will,
Employs the slender file with nicest skill;
Just sweeps the germin of disease away,
And stops the fearful progress of decay."

We have been fortunate in never having experienced personally the torture of TOOTH-ACHE; but we have heard it described by sensitive sufferers, as something beyond the power of language to delineate in its true colours. To those who have felt this pang the following lines will recall recollections of past sufferings—a source, as Virgil tells us, of great comfort, when the danger is over.

Forsan et hæc olim meminisse juvabit.

"They say who most have felt, and best should know
The power of this most execrable wo,
That when Pandora's box of mortal pains,
Was first unlock'd among the wondering swains,
To evr'y vice its kindred grief was sent,
And every crime received its punishment,
Except intemperance:—no *single* ill
Could Heav'n's irrevocable law fulfil,
The fixed resolve, th'omnipotent decree,
That each offence should meet its penalty;
Then all these mortal woes in one were joined,
And toothache came, the terror of mankind!
Thou haggard fiend! of hellish imps the worst,
To mercy deaf, by sorrowing man accurst;
Though cheerless days made desolate by thee,
And long, long nights of sleepless agony,
Have marked thy fearful reign in days of yore,
Thy power is crushed,—thy scorpion-sting no more
Affrights the helpless, for the dental art
Commands thy gloomy terrors to depart,
Then wipe's from beauty's cheek the tears that burn,
And bids her roses and her smiles return."*

The notes to the poem are by Mr. Parmly, who, as Bolingbroke furnished the materials to POPE, for his "Essay on Man," enabled the Rev. Solyman Brown to compose his Essay on the Teeth. These notes by some dull prosaic mortals, will be considered more valuable than the effusions of the Muse—we pity all such!

## Diseases of the Rectum. Mr. Liston.

The intellectual city has lost one of its most talented surgeons and dexterous operators. We hope the London University Hospital, and the British metropolis will afford ample scope for Mr. Liston's abilities, and that the profession will benefit by the zeal which appears to be diffused among the teachers in that infant institution. No stimulus is equal to that of NECESSITY! The NEW HOSPITAL and the NEW SCHOOL cannot hope to maintain their ground, much less ripen into maturity and reputation, but by the most vigorous efforts of every individual connected with them. This conviction is evidently felt by them all—and the public will profit, not merely by the exertions of that party, but by the impulse which it will lend to every hospital and school in the metropolis. Hence the advantage of free institutions and fair competition. The state of the world, and especially of the medical profession, is such, that no individual can hope to maintain his ground, much less to distinguish himself, without exertions almost superhuman—and it is the same with aggregations of indiduals—with public bodies.

---

* This passage reminds us of Burns's address to the tooth-ache.

"My curse upon your venomed stang,
That shoots my tortured gums alang,
And through my lugs gi's mony a twang,
Wi' gnawing vengeance!
Tearing my nerves wi' bitter pang,
Like racking engines!

When fevers burn, or ague freezes,
Rheumatics gnaw, or cholic squeezes,
Our neighbours's sympathy may ease us
Wi' pitying moan;
But thou—the hell o' a' diseases,
Ay mocks our groan!

Where'er the place be priests ca' hell,
Whence a' the tones of misery yell,
And ranked plagues their numbers tell,
In dreadfu' raw;
Thou tooth-ache surely bear'st the bell,
Amongst them a."

---

In a clinical lecture delivered at the University Hospital by Mr. Liston, the lecturer draws the attention of his pupils to narrowing of the anal passage, a complaint incident to the extremities of all mucous canals. "There is occasionally seen a permanent and organic stricture here, the orifice forming a hard, narrow, and unyielding ring. This arises from long-continued irritation of the part, immediate or remote, and consequent change of structure, from the cicatrization of rhagades (deep fissures); or it is seen to follow loss of substance, as after some of those unwarrantable incisions, excisions, or çauterizations, which are occasionally practised on these parts." This is not likely to be alleviated, he thinks, by further loss of substance, as has been recommended. But the contraction, in this place, is far more frequently of a spasmodic, than of an organic or permanent character, arising from irritation, either in the part itself, or in some other part with which the extremity of the gut sympathises. One of the most troublesome cases he ever met with, arose from the lodgement of a piece of bougie in one of the sinuous tracks of the rectum. Various foreign bodies, as pins, pieces of bone, or other indigestible things that are swallowed, may pass through the whole canal, and become arrested near the anus, keeping up constant irritation there. But the most common cause is the presence of chaps or fissures in the orifice—a complaint described by Paré and Wiseman, but more recently brought to notice by Baron Boyer.

"These rhagades or clefts are met with of various depths, singly or not; the one end of them is visible, but their full extent is not ascertained, unless when the patient presses down; they generally rise in the direction of the bowel, but sometimes deep ulcerated cavities are found within the sphincter, and running transeversely. Such breaches of surface no doubt frequently have their origin in laceration of the membrane, by the passage of hardened excrements or of foreign bodies. Large pieces of bone appear to pass along the whole track of the intestinal canal without difficulty or inconvenience, and are stopped by the sphincter. I have removed many (the last was nearly one half the jaw of a rabbit) from within its grasp. You can readily understand how the existence of such breaches of surface should occasion and keep up uneasiness and spasm in the outlet of the canal. The regulation of the bowels, the clearing out of the lower part of them, careful ablution, must all be attended to in such cases. The irritability of the sores may be done away with and their healing promoted by the occasional use of the nitrate of silver, in substance or in strong solution, applied by means of a camel-hair brush. The sores within can be readily seen and reached in most cases, so that remedies suited to their state may be employed."*

In some bad and intractable cases, it becomes necessary to divide the sphincter, which is readily done by a blunt-pointed straight, and narrow bistoury, conducted on the finger. The incision may be made through the fissure or ulcer; but it is not material whether the chap is involved or not in the operation. Some of the "RECTUM DOCTORS," Mr. L. remarks, have recommended the excision of a piece of the verge of the anus, as a remedy for contraction—and this is to be done "with such a cutting scoop as cheese is cut with." We do not recollect, at this moment, the "RECTUM DOCTOR," to whom Mr. L. directs the above sarcastic passage; but we should be sorry to employ him ourselves in any such operation. The prescription has not the advantage of homeopathic principles—that of employing *small doses* of the drug, whose effects resemble the original disease. Here, large doses of additional contraction are prescribed for that which already exists!

---

* Lancet, No. 508.

Stricture of the rectum, properly so called, is rather a rare disease. And the lecturer can afford no stronger proof of this rarity than the fact "that in all the pathological museums taken together, in this vast metropolis, you will find but very few specimens," unconnected with some specific disease, as syphilis, cancer, &c. The same holds good with respect to collections in other countries. We fear that Mr. Liston is not far wrong when he apprehends that "the frequent existence of this disease has been asserted now and then to serve no good purpose."

"It is not at watering-places only that such charlatanerie is practised; and as most invalids experience difficulties in evacuating the bowels, many become victims to the most disgusting treatment. So successful was the imposition, and so flourishing the trade, at one time, that a patient informed a friend of mine, that when he went for advice, he was ushered into a room where there was no less than eleven individuals, each with a bougie in his fundament, and with the small-clothes cut after a particular fashion, to facilitate their easy application."

Every body knows the locality to which Mr. L. alludes, and a celebrated name is seldom acquired without some *fundamental* cause. This indiscriminate practice of "Burgeeing," (as Jack Tar calls it) the rectum, is often attended with worse consequences than the mere extraction of money. The pocket of the "*malade imaginaire*" may as well be emptied by the rectum-doctor as by a colon doctor, duodenum-doctor, or even the stomach-doctor; but blue pill, and gentian draughts seldom produce such serious consequences as unnecessary poking with instruments into an irritated canal. "Not a few patients have succumbed rapidly within a very few days after the examination made with bougies and ball-probes." Sir C. Bell relates a fatal case of this kind, and Mr. Colles, of Dublin, alludes to the same subject. Our lecturer stumbled on a case where "a bougie *three feet* in length was considered necessary to reach the stricture."

"The disease to which the term of "stricture of the rectum" can with any propriety be applied, is met with immediately within the sphincter ani. It is a veritable contraction of the whole circumference of the bowel, varying in tightness, having a sharp edge, and attended with some thickening and alteration of the coats of the viscus for a little way above and below. There is a widening of the canal above from accumulation, a profuse discharge of vitiated muscus, of muco-purulent fluid, occasionally of blood, from the contracted part, or from accompanying piles; not unfrequently there is ulceration to be discovered above the contraction. Sometimes abscess forms in the surrounding cellular tissue, and makes its way into the bowel, by the side of it, outside of the sphincter; into the vagina in the female, or some part of the urinary apparatus in the male. In some rare cases, abscess has passed through the sacro-ischiatic notch, and formed a swelling upon the hip, through the opening of which, as in the case from which this preparation was obtained, fluid fæces and flatus are discharged. The track or fistula accompanying stricture, generally is *complete*, and opens into the bowel above. The contraction is generally single, but I have met with two cases in which one ring was situated above another, a portion of sound bowel being interposed; in fact there were two distinct strictures, but both within reach of the point of the finger; the upper one could be brought within reach when the patient bore down. The diseased part can even be brought into view, though this is seldom requisite, by the use of a proper speculum, such as I hold in my hand."

The occurrence of scirrho-contracted rectum is also happily rare, for it is a dreadful disease, over which we have little control. Its pains may be mitigated by securing an easy passage daily by means of lavements. We wish success to the worthy lecturer, and plenty of patients to exercise his skill.

### REMARKS ON ENDERMIC MEDICATION. By G. G. SIGMOND, M.D., Physician to the Charing-Cross Hospital.

We are only able to give a concise view of this able paper, which was read before the Medico-botanical Society.

"The continental medical men have considered cutaneous absorption, or imbibition, under two heads; to the first, which consists in the simple rubbing in through the skin of medicinal substances, they have applied the term iatraleptic medicine; to the second they have given the name of endermic, and this consists in the removal of the epidermis, by such means as will not produce any structural change in the subjacent tissue, and then the introduction of a remedial agent through the denuded surface; these two systems of cutaneous medication have been carried to a very great extent."

Dr. Sigmond's description of the epidermis and true skin we must pass over.

"In a lecture delivered by Magendie, and published in the *Lancet*, we find that he performed an experiment before the whole of his class, demonstrating that as long as the epidermis is in a sound and healthy state, cutaneous absorption does not take place, unless friction be employed. He placed with the glass tube a few drops of prussic acid on the integuments of a rabbit, and the poison did not produce any appreciable effect. This is at variance with the experiments of others. M. Emmett tells us, that he found the essential oil of bitter almonds, applied to the uninjured skin of a rabbit, produce the usual symptoms, and death, and, he adds, that the peculiar odour of the poison was very perceptible in the deep-seated muscles of the back. The absorption of lead, in whatever form it comes into contact with the skin, will produce colic, or the paralysing effects which it causes when taken internally, without any apparent action upon, or destruction of, the epidermis. Arsenic when applied to the skin of the human subject, may produce all the ordinary symptoms which attend its internal administration, and, indeed, it will act with equal violence and rapidity; the stomach will exhibit the same signs of inflammation. Mercury will also cause its peculiar effects when applied to the skin. Corrosive sublimate has been known to excite, through the sound skin, an action as violent as through the alimentary canal; salivation, and even death, have been known to follow its application. Vapours can be transmitted through the skin, and Magendie lately demonstrated the fact to his class. He enclosed a rabbit in a large glass, the head remaining outside; the vapour of the concentrated acid was introduced into the glass, and the effects were manifest in about two minutes and a half; it died as quickly as if the poison had been placed on the skin or tongue. This led to an idea, that a portion may have escaped from the bottle, and been introduced into the system by the lungs.

M. Nysten found that tetanus and death were the result of leaving sulphuretted hydrogen gas for some time in contact with the skin; and Buchner on one occasion remarked, that, whilst preparing cyanogen gas, the fore-finger, which was exposed to the bubbles as they escaped, became suddenly benumbed, and that this effect was attended with a singular feeling of pressure and contraction in the joints of the thumb and elbow. We must, at any rate, all feel convinced, that substances, if in contact for any length of time with the epidermis, and more especially when aided either by animal or artificial heat, will be imbibed or absorbed. Some of them may act by mechanical destruction of the epidermis, or by some alteration in its structure. There are, besides, certain diseased states of the skin, in which absorption takes place very rapidly; thus, an infusion of tobacco applied to the head for the cure of tinea capitis has been known to produce all the bad effects which have resulted from the injudicious administration of tobacco.

Few medicines have been more fairly tried as an iatraleptic, in France, than digitalis in the cure of dropsy, and it has answered the most sanguine expectations that had been formed of its success. Dr. Chrestien, to whom we are most indebted for his experiments, has given us a fair narration of the cases which were successfully treated, and those in which it has failed. He is borne out in his practice by M. Cros Rogery, de St. Geniez, by Bernard de Beziers, by Blavet de Montbozin, by Rouchy de Montpelier, and Archbold Aspold. Under M. Rogery's treatment by the friction with digitalis, a case of dropsy of the abdomen, which followed upon a repelled eruption, was cured; under Dr. Chrestien, dropsy, the sequela of scarlatina, in a boy of five years of age, disappeared; and dropsies consequent on visceral inflammation, and on splenitis after intermittent fever, have yielded to friction upon the hypogastrium with tincture of digitalis, three times in the course of the day. The tincture is prepared by macerating for a quarter of an hour, an ounce of the leaves in three of alcohol. The method employed by Brera, which was the first introduced, and was therefore somewhat rude, consisted in macerating the digitalis in saliva, and then applying it by friction to the abdomen. In the only cases (two in number) in which I have had an opportunity of seeing it employed, I cannot say that I have seen any permanent benefit: but they have not been cases in which a favourable result could be fairly expected, as they have been desperate cases, in which all other remedies had failed. In one of these, which I have reason to believe is caused by an aneurism of the cœliac artery, and where the effusion is most rapid after the operation of paracentesis, the kidneys have lost almost all power of secretion; but, during the first two days of friction with the tincture of digitalis, prepared according to Dr. Chrestien's formula, they were evidently stimulated into some action, but soon returned to their previous torpid state.

The atropa belladonna has been tried as an iatraleptic, by Dr. Gouvion and M. Carre, in the most painful cases of neuralgia; and in rheumatism it has been found eminently successful, when its extract has been rubbed upon the abdomen, upon the sternum, or the dorsal vertebræ. In cases where, during labour, spasmodic contraction of the neck of the uterus has resisted the use of the lancet, Mad. La Chapelle says that the extract of belladonna, assisted by warm baths and emollient fomentations, rubbed upon the region of the uterus, have answered the most sanguine wishes of the accoucheur. In the reduction of hernia it has likewise been of great and important service: and also in retention of urine occasioned by muscular spasms about the neck of the bladder. M. Chevalier has published some interesting cases of spasmodic stricture cured by a bougie, on which belladonna was put. Castor oil rubbed over the abdomen produces the same effect as if taken internally, and more especially if aided by the use of the warm bath. Obstinate constipation has yielded to this remedy; and where such violent and constant sickness has been present as to preclude the possibility of the internal administration of the oil, it has produced all its good effects, without adding to the distressing state in which the stomach is found. I have seen by these means an action produced upon the bowels within a quarter of an hour after the friction had been employed, immediately on the patient leaving a bath of the temperature of 98°, where calomel, jalap, neutral salts, and lavements, had failed to relieve the intestinal canal, and where constant vomiting had commenced, and all idea of internal remedies had necessarily been abandoned. Croton oil likewise produces a complete relief of the contents of the bowels, when employed in a similar manner, and more particularly when combined with castor oil, as its general effects, when employed alone externally, are the production of a number of small red pimples, which become pustules resembling those of the small-pox, or those which are produced by tartar-emetic; and experiments have been made upon upwards of thirty patients, which prove its efficacy as a counter-irritant.

Endermic medicine consists in the removal of the epidermis by such means as cannot produce any structural change in the subjacent tissue, and then the application of a remedial agent to the surface thus denuded. Various are the modes which have been employed to expose the part on which remedies are to act; the most common practice is to apply a blister of cantharides; others prefer liquid ammonia. Boiling water has been tried, but it changes the natural structure of the skin; phosphorus has a similar effect: various other vesications have been employed, but they have been generally found to produce some irritation of the exposed surface, by which means the transmission of blood through the capillary vessels has been impeded, and thus the expected influence has been lost; the epidermis should be cut with a pair of scissors, and beneath it is to be introduced the remedial agent: if it is an insoluble substance it is to be sprinkled on the exposed surface; if it is a fluid it may be applied by moistening a small piece of lint with it. The seton is another mode by which it may be introduced, but great care and caution are requisite. Magendie gives us an instance of its bad effects in an old curé, who was poisoned in this manner by the introduction of a morsel of strychnine into a seton. The effects, in many instances, are exhibited in a very brief space of time, and the rapidity with which they are absorbed is such as to demand the greatest attention, more particularly as very minute doses will operate very readily, so much so, that very serious results have followed the application of arsenic and other remedies to denuded surfaces.

The French adopt the following plan:—Where an instantaneous blister is necessary, cut a piece of cotton, of linen, or of paper, of the size and shape for which it may be required; immerse this in spirits of wine, in strong brandy, or in eau de Cologne, lay it on the surface to be blistered, wiping the edges, so that none of the fluid may moisten the surrounding parts; apply a lighted candle rapidly over the whole surface, that it may all be burnt immediately. The ignition is exceedingly quick, and the cuticle will be found separable from the subjacent cutis.

Quinine, as an endermic remedy, has been tried with great success in the cure of intermittent fever. M. Martin published, in the *Archives Generales*, an essay on this subject. He found that thus introduced into the system, even in very small quantities, it arrested the progress of the disease. M. Lambert next tried it, and succeeded, and the practice has now become general. If a blister be applied to one of the lower extremities, and when the skin be sufficiently raised, a very small quantity of the sulphate of quinine be applied, in about ten minutes a sensation of gentle heat will be perceived in the limb, ascending to the back, and gradually diffused over the whole system. The hot fit comes on before its usual period, and the whole of the paroxysm is shortened. Even the introduction of ten grains has been found sufficient to arrest the progress of an ague. Care must be taken to reduce the quinine to a very fine powder, and to incorporate it with simple cerate, or some greasy matter, for without this a high degree of irritation will be produced. Dr. Stokes tells us, that one of the most severe and troublesome forms of ulceration he had witnessed for a long time, occurred in a case in which quinine had been applied to a blistered surface. Over the whole extent of skin to which it had been applied numerous ulcerations took place, which resisted, for the space of six weeks, every attempt to heal them. It appears that quinine is one of the most valuable of the endermic remedies, for it can be introduced where gastric irritation prevents its internal administration; it acts more quickly than through the stomach, and small quantities only are required.

Some of the narcotic medicines have been employed most beneficially in the endermic way. M. Lesieur, who published a treatise upon the 'Nouvelle Medication par la voie de la Peau,' relates seventeen cases in which he tried the acetate of morphine at the Hospital Cochin and the Bicetre; of these, four were chronic catarrhal affections which were quickly relieved, and soon cured by the application of acetate of morphine to a blistered surface; half a grain gradually increased to two grains, was introduced; this was continued for a month, and whenever the treatment was intermitted the symptoms returned. Two cases of phthisis pulmonalis were relieved, but the dose was necessarily smaller. Pleurodynia, which resisted leeches, blisters, and other remedies, was thus relieved; a neuralgic affection of the temple was cured by the same means. A very interesting case occurred at La Pitié, in February, 1826, the details of which are to be found in the July number of the *Medico-Chirurgical Review*, condensed from the *Archives Generales de Medicine*. It was one of those gastralgic affections, which similate gastritis of a chronic kind, attended with perpetual vomiting, and in which no internal remedy could be employed. M. Lambert applied gr. ss. of acetate of morphine to the blistered surface; in a few minutes the vomiting ceased, as if by magic, and the patient passed a better night than she had done for some time. The next day the process was repeated, and the patient slept the whole of the day; the acetate of morphine was gradually increased, until at length food was retained, and a cure effected. M. Bally, in the Memoires de l'Academie Royale de Médecine, details its effects on rheumatisms, lumbago, and sciatica, and he states that three cases of tetanus were treated by it with success; one was traumatic, the second produced by strychine, and the third by fright.

M. Magistel has made public the happy result of his employment of acetate of morphia in hemicrania. Dr. Stokes, of Dublin, has been successful in two cases of intermittent hemicrania, which soon yielded to this treatment.

M. Bally has employed strychnine in this manner with considerable success. Of two men affected with paralysis of the hands, one was evidently cured by the application of a grain to a grain and a half of strychnine daily to the raw surface produced by a blister; the second recovered the use of one hand, and nearly recovered that of the other, and a third paraplegic patient was able to walk. M. Lesieur has applied powdered strychnine, one-sixth of a grain, to the blistered surface for hemiplegia; when the quantity was increased to two grains, a paroxysm of tetanus supervened, which was dissipated by the substitution of acetate of morphine for the strychnine.

Mr. Foote tells me that he has had, at the Royal Westminster Opthalmic Hospital, an opportunity of seeing amaurosis treated by strychine endermically employed; a small blister was applied to the temple, and the epidermis removed, after which a quarter of a grain of the alkali was sprinkled on the sore; the dose was gradually raised to a grain: during its exhibition some of the peculiar symptoms attendant on strychnine became evident, namely, spasmodic twitchings, &c. In one or two cases it appeared to do good; vision certainly improved, but it was not pursued far enough to effect a cure; of course the danger attendant upon the employment of larger doses would naturally prevent the full use of this active substance, more particularly when the fact of the death of Majendie's curé by a morsel of strychnine endermically introduced is so well known. Very few purgatives have as yet been tried according to this method, but it has been found that tincture of aloes, applied to a denuded surface, will act upon the bowels quite as copiously as if taken internally, and many of this class of medicines act with a rapidity quite equal to that celerity with which the bowels act. It has been known that ʒij. of colycynth, or bitter apple, applied to the wound of a dog, has destroyed it with great rapidity. The necessity for the administration of endermic purgatives has not yet arisen, and therefore they have been less employed than the narcotics, from which so much benefit has been derived. Musk, belladonna, datura stramonium, hyosciamus, have been all applied in neuralgia, and with evident success, and the names of Bloquiet, Piorry, and Trousseau, are sufficient testimonies of the truth of the power of these remedies."

AN EXPOSITION OF THE NATURE, TREATMENT, &C. OF FEVER. By HENRY M'CORMAC, M.D. Octavo, pp. 202. Longman and Co. 1835.

Dr. M'Cormac, who is a studious, intelligent, and observant physician, has constructed a work which bids defiance to analysis—and, strange to say, to *criticism* also. It defies analysis, because it is itself a most elaborate analysis of all that has been said, done, and even thought of fever since the creation of the world down to the æra of reform, in our days. Having thus assumed the office of analytical reviewer, Dr. M'Cormac would be offended, and justly so, if we, as brother-reviewers, took up the pen of criticism, and attempted to question the judgments, the dogmas, or the decisions of one of our own fraternity. The most ferocious animal that roams the deepest forests will not prey on its own species—and will scarcely touch the carcase when dead. We will not, therefore, set a dangerous example, lest our arms should, one day, be turned against ourselves—lest the puissant WE—the venerable Æachus, Minos, and Rhadamanthus should, some day, be bearded on their own benches, and their decisions set aside by some ruthless innovator on the wisdom of their forefathers. We are not speaking metaphorically, but literally the truth. The work is an analytical review of all that is connected with fever, its causes, nature, treatment, and prevention, guided by the light of extensive personal experience; the author having practised in "three different quarters of the globe"—and being now connected with a fever hospital in Belfast.

The prominent features of the author's, or rather the reviewer's doctrines are—that the primary link or lesion in fever is "innervation, varying in amount, and productive of all the different phenomena which distinguish the frame of one who suffers under this disease, from that of another, in the enjoyment of perfect health." In short, that the remote or invisible cause or causes of fever, act primarily on the nervous or sentient system, in consequence of which one or *all* of the functions with which the nerves have any thing to do, become deranged. They do not, in general, become all equally affected. More frequently one organ suffers in a greater degree than another, and thus have arisen the monophlogistic doctrines of Broussais and Clutterbuck. Dr. M'C. supposes also that the blood is deteriorated, and thus he presses as much as he deems proper of the humoral pathology into his service. The reviewer, in fact, is an eclectic, in the true sense of the word, and, without adopting any one system exclusively, culls from all doctrines and practices whatever appears to him both rational and useful. The thread by which these selections are woven together, is strong and silky, constituting no inconsiderable portion of the whole texture, and that, too, fresh from the wheel or engine. As a reviewer, Dr. M'Cormac deserves great praise for adopting the "fortiter in re," as well as the "suaviter in modo." There is but one other remark to be made—his general acquaintance with German writers has enabled him to cull largely from a field, but little open to English writers.*

---

* Dr. M'C. speaks very highly of a little German book, the "*Gesundheitkatechismus*," or Catechism of Health, by Dr. Faust, and strongly recommends its translation into English. Is not this the work which the Quarterly Review brought forward, as the source from which Dr. Granville drew much of the materials for his Catechism of Health?

## II.

## SPIRIT OF THE FOREIGN PERIODICALS, &C.

### STATE OF MEDICAL OPINION IN PARIS.

In the following brief remarks, we shall attempt to embody the general scope and tenor of the introductory lectures, recently delivered by three of the most eminent professors, MM. Velpeau, Chomel, and Andral, on " Clinique Chirurgicale, Clinique Médicale, et Pathologie Interne," before the Faculty of Medicine in Paris. " Three doctrines," says the first of these authors, " have successively swayed the opinions of medical men, viz. those of vitalism, humorism, and solidism. In the present day, vitalism, as a system of tenets, is almost banished from the French school of physiological medicine ; but still retains its ground in Germany, and has also a sanctuary in the faculty at Montpelier. Humorism, too, like its predecessor, had, until within the last 12 years, experienced with us the same fate, and every system was thoroughly imbued with the spirit of an exclusive solidism. Nevertheless, the one has always appeared to me to be quite as rational, and as harmonizing with the phenomena of living matter, as the other ; and it is now many years since I first raised my voice in support of a limited humorism, although, at that time, it required a certain degree of courage to call in question the authority of the reigning doctrines. My opinions have, however, been gradually advancing in favour, and their truth is now acknowledged to be confirmed alike by reasoning and by observation. Does not the body consist of fluids as well as of solids ? are not all the solids originally, and indeed unceasingly, derivable from the fluids ? and can it, therefore, be at all wonderful, that the latter may be primarily diseased as well as the former ? Certainly not. Surely, then, it must be illogical in the extreme, to refuse to recognize any but secondary or consecutive diseases of the fluids. The well-known results of transfusion and inoculation abundantly testify the operation of direct changes of the circulating fluids, and one very interesting feature of such experiments is, that in numerous cases, the same disease is generated in the person on whom they are performed, as affects him from whom the translated matter is obtained. Besides this important set of humoral, or at least of partially humoral, diseases, there is another class, which, until of late years, has been totally overlooked since the beginning of the present century—we allude to the spontaneous alterations of the blood, independent of the introduction of any foreign matter from without, and to those alterations particularly, in which there is found a purulent admixture in the bloodvessels. It was in 1818 that my attention was first drawn to this curious morbid phenomenon :—A woman in the hospital at Tours died, from the effects of a comminuted fracture of the tibia, complicated with numerous depositions of pus in different parts. On dissection, the principal viscera were found 'parsémés' with small abscesses, the walls of which exhibited no traces of any inflammatory action having ever existed ; and the blood exhibited a very altered appearance, as if purulent matter had been mixed with it. " Ce fut un trait de lumière."—(*Vide* a remarkable case of this morbid change in the subsequent article of the present No.) Since that time, the attention of many medical men has been drawn to this subject, and numerous cases have been published in the various journals. The researches of MM. Dance, Lee, &c. have shown that, in some fatal puerperal diseases, the contents of the uterine and other veins not unfrequently exhibit very striking abnormal appearances, purulent matter being blended with the altered blood ; and in cancer, melanosis, &c. portions of encephaloid substance have been found in the veins after death. We do not, however, lay much stress on the pathological changes of the blood, in the set of cases now alluded to, as they are indubitably consecutive and secondary, not primary and idiopathic, in their occurrence.

But it is unnecessary to argue, at greater length, in favour of a limited, not an exclusive, humorism. The true physiologist omits the consideration of no part of the living body, and of no agent which can influence its operations and power; and, well knowing the complexity of the machine, he is forced to admit that diseases "sont des problèmes infiniment complexes, dans la solution desquels il faut faire entrer tous les elemens de l'organisme." Every morbid phenomenon implies the existence of a heterogeneous agent, which, either derived from without or generated within the body, is the exciting cause of the diseased process. The effects of this agent vary, according to its locality, quantity, and especially its nature. We may mention, as undisputed examples of the obvious operation of this agent, the consequences of exposure to miasms and certain viruses. Now this etiological doctrine, admitted to be true in the case of some diseases, and rendered so probably in that of others, leads the phylosophic physician to enquire whether there are any therapeutic specifics. It is in vain to expect that an incipient small-pox, ague, or itch, can be cut short by any antiphlogistic remedies—the "peccant thing" will resist all such attempts until it either exhausts itself, after continuing for a certain time, or it is counteracted by a specific remedy. Let it not be imagined that we deny the occurrence of an inflammatory process, in these and other cognate diseases; all that we contend for is, that this process is not an original and essential, but only a secondary and superinduced attribute of them. The abstraction of blood may be of the greatest benefit in checking or allaying increased or irregular action, but it does not and cannot have any direct influence in combating the primary cause of the disease; "elle ne s'addresse qu'aux epiphenomènes." In not a few cases, the body is of itself capable of resisting and overcoming the operation of the noxious agent, and then it is either nullified, or expelled from the system by its own unassisted reaction; but these cases are rare, compared with the multitude of those in which the natural powers are insufficient, and against which we have not yet discovered any directly neutralizing remedy. We are, therefore, in default of this knowledge, obliged to be satisfied with employing the "rational method" of prevention and cure, in our treatment of diseases, by combating symptoms as they are devoloped, or even by merely employing means which have been found by experience, to be remedial, although we cannot explain the why and the wherefore of their operation.

The pervading tone of Professor Chomel's lectures exhibits an equally enlarged and philosophical view of medical science as that now unfolded by M. Velpeau. Unfettered by the dogmata of any one school, and with a liberal and comprehensive turn of mind, which leads him to view things and appearances as he finds them, and not as he wishes to find them, he hesitates not to expose the fallacy of the prevailing exclusivism, which has tyrannized in medicine during the last thirty years. "Morbid anatomy may be useful; nay, it is (he says) indispensable in the study of diseases: it is one of the most solid bases of rational diagnosis, and one of the surest guides to a rational system of therapeutics; but, it is not, for all this, the only and the exclusive one. Its importance has been viciously exaggerated of late years, and the organic pathology has, perhaps, led to quite as much mischief, in doctrine and practice, as the undefinable vagaries of the old school of vitalism which preceded it—"le premier ne prouve souvent rien quant au traitement applicable; car l'etat general de l'individu, l'anciennéte, l'intensite, la physionomine des symptomes, entrent souvent, comme elemens essentiels et primordiaux, dans l'indication, et, pour ainsi dire, dans la construction de la maladie tout entière." The lesions revealed by dissection point out the effects, but surely not the causes of disease, and, in too many cases, contribute but little to the discovery of a successful treatment. To observe scrupulously—to be cautious of making deductions, except from facts minutely and frequently recorded—to avoid framing hypotheses, and indulging in quick conjectures, these are the elements of true medical philosophy. Every mere system of physic must necessarily be imperfect and full of faults; and, although the simple study of appearances, by themselves, has the effect of rendering a pursuit teasingly complicated and laborious, it is the only safe course to follow in so doubtful a science as medicine ever must be. When we begin to reason as to the causes, and the essence or nature of any particular disease, we enter on a labyrinth of multitudinous perplexities. To say that such an organ or viscus is affected, is vaguely to hint at the locality of the mischief; to indicate the particular tissue involved, is to circumscribe the allegation within narrower bounds; to describe the state of the sanguiferous and other vessels is, we must confess, to advance a step further to the object of our search; but still, beyond this rude knowledge there are other morbid elements, whose nature and whose workings are almost wholly hid from our ken. It is by no means improbable that some of the imponderable gases, electricity and galvanism, for example, play an important part in the generation of morbid processes; and that chemistry may, in the course of time, be made a more successful analyst, than hitherto, of pathological changes, by revealing the alterations in the immediate principles of the organized body, at the beginning and during the progress of a deviation from health. Have we not some well-grounded reasons for believing, that an excess or deficiency of one or other of the elementary constituents of the blood may be connected with the development of some diseases? that, for example, an excess of nitrogen may predispose to, or virtually induce, a deposition of uric acid in the kidneys and in the joints, and thus give rise to gravel and gout? Is it improbable that the accumulation of fatty matter, in the livers of phthisical patients, may be dependent upon the deficient elimination of an hydrogenised principle from the lungs? and may we not suspect that chlorosis coincides with a diminution of the normal quantity of iron contained in the blood? Speculations of this nature may seem visionary to those who call themselves practical men; but they may nevertheless be founded in truth, and may, at a future period, affect the practice of our profession in an essential degree. The time may, indeed, be distant, when medical chemistry may achieve results so important; but we may hope to prepare the way, at least, for such enquiries, by a more frequent and minute examination of the more immediate and obvious constituents of the blood, viz. the albumen, fibrine, &c. in health and disease, than has yet been done.—“ Quoiqu'il en soit, les solides et le sang, voila les deux bases, les deux supports d'une maladie, elemens inseparables, alternativement cause et effet de leurs mutuelles alterations.” The one cannot be long affected with disease without the other being speedily involved.”

Such are the sentiments of M. Chomel; and we come now to consider those of a still higher authority than even him, or, indeed, than almost any other of the French school. The pathologist who takes so enlarged views of medical science as M. Andral does, could not long fail to perceive the errors of the reigning French school, which endeavoured to localize every malady, and strove so earnestly to banish such epithets as general, systemic, or essential, applied to diseases. Although led along, for some years, with the current of public opinion, he speedily discovered how ill it harmonized with clinical observations, and he was forced to recognize the existence of diseases essentially and primarily general, or in which the whole organism is disturbed from the first moment of invasion, as well as those which are primarily local, although the system may soon be forced to sympathise.

The ancients committed the error of regarding almost all diseases as general; the moderns have gone to the other extreme, and have been equally blind to Nature's operations, by refusing to admit any as such. Not to mention the numerous class of fevers, what shall we say of scrofula? in what exclusive part of the system can it be said to be localised? It is, in truth, essentially a constitutional disease. As it may be interesting to the English reader to know the classification of diseases which M. Andral adopts in his lectures, we have subjoined the following table.

| | | |
|---|---|---|
| 1 Lesions of the Circulation | Hyperemia | Active<br>Passive<br>Mechanicical |
| | Anemia | |
| | Phlegmasia | |
| | Hæmorrhage | Active<br>Passive<br>Mechanical |
| 2. Lesions of Secretion | Of the liquids | Excess—dropsy, flux<br>Diminution<br>Alteration |
| | Of the gases | Alteration in quantity<br>Alteration in quality |
| 3. Lesions of Nutrition | Errors of confirmation | |
| | Alterations in texture | Hypertrophe<br>Atrophy<br>Perversion |
| | Cessation (gangrene) | |
| | Accidental productions | Abnormal structure<br>Entozoa |
| 4. Lesions of Innervation | Lesions of sensibility | |
| | ——— of motility | |
| | ——— of a special function, as gastralgia | |
| 5. Lesions of Function | These necessarily imply a material alteration in some organ or another; but an alteration whose essence is unknown, and which is distinct from the lesions of the four preceding classes. Epilepsy chorea, dyspepsia, &c. may be adduced as examples. | |

---

### Purulent Alteration of the Blood.

A woman, 27 years of age, who was recently admitted into the Hôpital de la Pitié, under the care of Professor Rostan, presented the following symptoms:—The general emaciation was extreme—the breathing hurried and difficult—the pulse rapid and very weak—the bowels were much purged, and she had profuse perspirations, especially when asleep. From the imperfect account which could be obtained from herself, it appeared that she had been long ill, and had, within the preceding fortnight, been confined to bed. In such a case, it was natural to suspect the existence of confirmed phthisis, and an attempt was, therefore, made to examine the chest by auscultation; but this was unsatisfactory, as the patient could not remain quiet for a moment, and she was continually moaning. She died on the second day after her admission.

*Dissection.* On examining the encephalon, all the sinuses were found to be filled with a thin, reddish fluid, in which numerous grey-coloured and friable flocculi floated. The contents of the veins of the pia mater at some points were similar; at others, they had a more decided purulent appearance. The parietes of these vessels did not exhibit any change of texture. The lungs were on the whole healthy; no vomicæ, nor even tubercles could be discovered in any part; the bases of the lobes were gorged with blood, but not hepatised. The bronchi contained a quantity of mucosity, but their surface was not reddened, or otherwise abnormal. The heart was large and excessively distended; and more especially its right cavities. On cutting into the ventricles, a quantity of blood, having the colour of wine-lees, escaped; on examining this blood, it was observed that it contained several dark-coloured softish coagula, and also an immense number of yellow friable floculi, exhibiting all the appearances of half-concreted pus, and resembling the semi-purulent floculi found in the abdomen after peritonitis. In the left auricle, one of these floculent masses, as large as a walnut, was found floating free in the decomposed blood. The contents of the pulmonary artery and veins were altogether similar. No trace of disease could be discovered on the inner investing membrane of the heart and large blood-vessels, except that it was perhaps unusually pale. On opening the thoracic and abdominal aorta, the carotid artery and jugular veins, similarly altered blood, with purulent floculi floating in it, was found in their cavities.

*Abdomen.* The stomach and small bowels did not present any marked appearances of disease; the glandulæ Peyeri were healthy. Almost the whole extent of the large intestines was thickened, and their mucous coat exhibited numerous ulcerated points; these minute ulcers were superficial, and could be best seen by stretching a piece of the gut, and holding it up between the eye and the light: in the cæcum they were largest and also deepest. The mesenteric glands were very generally swollen, some of them being as large as walnuts; when cut across, their structure was not unlike that of hepatised lung, but no traces of suppuration could be detected. The mesenteric arteries and veins contained a mixture of blood and purulent matter, such as we have described. as observed in other parts of the sanguiferous system: the parietes of these vessels appeared nevertheless to be quite sound. The liver, and still more remarkably the spleen, were of enormous size, and their texture was much indurated. The latter viscus exhibited numerous white nacreous points, and its colour throughout was rather a deep yellow (not unlike to that of some livers) than the usual dark red. The hepatic and splenic blood-vessels were filled with "le liquide couleur lie-de-vin, et ces flocons purulens deja mentionnés." The kidneys, bladder, uterus, and ovaries were in a normal state.

*Blood-vessels of the Extremities.*—"Partout nous avons rencontré la meme alteration du liquide qu'elles contenaient. Nous avons ouvert plusieurs vaisseaux collateraux des doigts, et l'alteration du sang existait là comme partout ailleurs. Dans aucun point nous n'avons trouvé de traces d'inflammation, soit dans les arteres, soit dans les veines: tous ces vaisseaux ont été incisés, leur face interne a été lavée et examinée avec le plus grand soin, et partout elle etoit aussi intacte que dans les autres organes de la circulation."

In concluding the report of this most interesting dissection, we cannot help expressing our regret, that the large joints were not examined, as it is well known, that in some cases, similar to the one now described, very extensive depositions of purulent matter have been found in these cavities. The omission arose altogether in the present instance from forgetfulness. It deserves however to be noticed, that the patient, although in a dying state when admitted into this hospital, made no complaint of pain or uneasiness in any of her joints.

*Remarks.* Perhaps in no case, hitherto recorded, has there been found so general and so marked an alteration of the circulating fluid as in the one which we have now described. In some of them there was found purulent matter mixed with coagula in the venæ cavæ, and in the right cavities of the heart; in others, but these are more rare, the admixture was discovered in the ramifications of the pulmonary artery; and when it was observed in the aorta, it was always in very minute quantities; a few drops only of pus being detected in the centre of largish coagula of blood. The extremely interesting feature of the present case is the universality of the morbid change; and that, notwithstanding this, there was no appreciable lesion of the blood-vessels in any part of the body. The examination of this point was most minutely made: all the vessels of the extremities, the sinuses of the dura mater, the arteries of the brain, all the considerable vessels of the chest and abdomen were not only opened, but carefully washed, so as to free their surfaces "de la matiere sanieuse qu'ils renfermaient;" but no vestige of morbid alteration was to be seen in any of them; not even a patch of inflammatory redness. This entire absence of such changes is the more worthy of remark, as in almost all the cases hitherto recorded, there has been discovered after death, at some part or other of the venous system the mark of a preexistent phlegmasia, or of its consequences, such as pseudo-membranous effusion, thickening and hardening of the vascular parietes, or injection of the vasa vasorum, &c.; yet in none has there been found even a moiety of the purulent matter in the blood. The conclusion is therefore forced upon us, that the proximate cause of the morbid change was not an inflammation of the vessels, either arteries or veins, although we certainly did, during the life of the patient, suspect the existence of uterine phlebitis, from having seen some case of this disease, in which the symptoms were analogous to those in the present case: the dissection, however, completely disproved this idea. It may be supposed by some that the large quantity of purulent matter which was found mixed with the blood had been absorbed from some internal abscess, and been thus conveyed into the circulating system; and although no abscess was discovered in any part examined, it may possibly be conjectured that the articulations were the seat of the mischief, and that it was into their cavities that the purulent effusion had originally taken place. True it is, that we cannot positively contradict this opinion, from the joints not having been opened; but the supposition appears to us very problematical, and we should be inclined to suppose, that the pus, if it really did exist in the present case in the joints, was the result, rather than the cause, of the alteration of the whole mass of the blood. It is now an acknowledged fact of pathology, that when a vein becomes inflamed, or is exposed with open mouth to a purulent deposit, the joints, even the most distant from the seat of the disease, are often found to contain pus in considerable quantities. In uterine phlebitis, and after amputations and other important operations, this phenomenon has been frequently observed. In some of these cases, the existence of suppuration, accompanied perhaps with softening and even ulceration of the articular cartilages, was associated during life with symptoms so obscure and unsatisfactory, that the most experienced practitioners, even when their suspicions were excited, were left in doubt and uncertainty; whereas, in other cases, the symptoms were sufficiently well-marked, such as excruciating pain in the parts, outward redness and swelling, &c.

We have already stated that our patient made no complaint of uneasiness in any of the joints. In conclusion, the most interesting features of the present case may be stated to be the universality of the purulent admixture with the blood, the absence of any visible disease of the blood-vessels, and the absence of internal abscesses: and we shall now leave it to our readers to determine whether the disease was attributable to a primary and idiopathic disease of the circulating fluid, or whether the morbid change which this had suffered was secondary and consecutive. "Peut-etre," says M. Andral in the fourth vol. of his Clinique Medicale, "l'epoque n'est elle pass eloignée où l'on reviendra à cette idée de De Haen, qui admettait que, dans certaines circonstances, le pus peut se former de toutes pieces dans le sang comme on voit s'y former, l'urée dans l'état physiologique." Those who are interested in following out the curious subject of purulent changes of the blood, will find much instructive matter in Velpeau's memoires, published in the Archives Generales and the Revue Medicale for 1826; in M. Dance's paper in the Archives for Dec. 1828, and in some observations communicated by M. Le Gallois to the Journal Hebdomadaire for May, 1829.—*Archieves Gen. Oct.* 1834.

---

## CASES OF TRAUMATIC PHLEBITIS.

*Case* I. A man 25 years of age, was brought to the Hotel Dieu, in consequence of a lacerated wound of the forehead, which he said he had sustained by falling out of a cabriolet. The lacerated and contused appearance however of the wound, made M. Dupuytren suspect another cause for the injury; and upon a rigid examination, the patient at length confessed that he had, during a moment of mental disquietude, pointed a pistol to his head, and that the two balls, with which it was loaded, had torn and lacerated the integuments. The frontal bone could be felt denuded and rough on the surface. The wound was enlarged, to remove the existing tension of the parts; and a free venæsection and other antiphlogistic means were then actively employed. Erysipelas however attacked the wound, and spread over the face and scalp; symptoms also of gastroenteritis came on. They were treated by leeches and the internal use of the tartrate of antimony. The suppuration from the wound became very profuse, and the unfavourable symptoms of universal depression, delirium, subsultus tendinum, &c. indicated a fatal result. Coma supervened, and he died at the end of the third week after his admission into the hospital. (It appears from the report that on the two days preceding his death, and when the train of last-mentioned symptoms had fairly set in, the use of large numbers of leeches and of full doses of the antimonial tartrate had been continued.—Surely *such treatment* was most unwise and pernicious.)—*Rev.*

*Dissection.* The scalp was found to be separated from the bone all round the edges of the wound to the extent of an inch or two; at one part the periosteum was found detached, and the surface of the bone quite bare. The adjacent soft parts "contenaient du pus non rassemblé en foyer." Under the eyebrow several drops of pus were observed to ooze out, as if they escaped from the divided blood-vessels. The veins of the orbits were found to be full of pus. When the scull-cap was removed, a deposit of purulent matter was found between the bone and the dura mater, and also underneath the arachnoid coat, opposite the seat of the injury. The substance ofthe cerebrum at this part, was softened and discoloured,and the neighbourhood was redder than usual, and its vessels fuller of blood. The liver was "parsemé" with yellow patches, and the surface of each of these patches was covered with a deposition of coagulable lymph. On dividing it across, numerous abscesses were observed throughout its structure, varying in size from that of a pea to that of a walnut. The number of these "foyers purulens" must have been at least 150. Both lungs exhibited similar morbid changes; but in them the abscesses were more diffused, probably in consequence of the pulmonary interstitial cellular tissue being looser and less compact than that of the liver.

*Case* 2. A man, 37 years of age, was admitted into the hospital, with a comminuted fracture of both bones of the left leg; this injury was complicated with five or six narrow wounds of the soft parts, and had been caused by a heavy weight having fallen on the limb. The patient was bled no fewer than six times from the 28th of January (the date of the accident) to the 7th of February. "Son etat n'offrit rien de particulier pendent ce temps." (Where then the necessity of such vigorous treatment?) But on this day he complained more than he had yet done of severe head-ache, and towards the evening he had a feverish attack, commencing with a shivering fit, and accompanied with tendency to delirium. On examining the bandages round the leg, they were found to be moistened with an offensive discharge; and when the limb was exposed "l'appareil fut trouvè baigné de pus et de sanie, les compresses trempées d'un pus noiratre, la peau tombée en suppuration, en gangrene là ou elle etait le plus contusé."

Considering such a state of things, (arising, it would seem, from sheer neglect,) we cannot be surprised to be told, that "des lors, l'etat general du malade presenta plus de danger que l'etat local." The pulse became frequent and feeble; there was a tendency to profuse perspiration: a troublesome cough and frequent expectoration came on; the breathing was oppressed, and the features indicated great inward distress. At one time, the patient was muttering and incoherent in his speech, and at another, he was almost quite comatose. A camphorated blister was applied to the chest; but neither this, nor the julep of polygala, nor indeed any other julep, was or could be of the least use. The poor fellow died on the 12th of the month.

*Dissection.* The seat of the fracture was found bathed with pus; the veins of the limb were most carefully examined, but no traces of purulent matter could be discovered, either in these, or in any of the other veins of the body. On opening the thorax, the surface of the lungs was "parsemé" with at least a score of yellow patches, the average size of which was about that of a horse-bean. When the substance of the lungs was divided, these "taches jaunes" were found to be composed "de petits grains extremement fins, jaunes, d'une consistence assez forte, se rapprochant de celles de la graisse." On squeezing them, globules of pus oozed out. The liver exhibited a similar, only a more extensive degeneration. At fixe or six places on the surface of the right lobe, there were abscesses, some of the size of the walnut, and others as large as a hen's egg; the investing peritoneal coat was thickened and opaque. "Le rest du corps presentait un etat d'anemie tres marqué." (No wonder, when we think of the patient being bled "six fois" within ten days after the accident.)—*De la Phlebite Traumatique. Thes. Paris*, 1833.

## ON THE NATURE AND TREATMENT OF ACUTE RHEUMATISM.

There are at present two prevalent theories in reference to the etiology of this very common disease, and it is not a very easy matter to decide on their respective merits, or whether either of them is exclusively and 'per se' correct: According to the opinions of one set of physicians, acute rheumatismal arthritis depends upon a primary alteration of the blood, its fibrinous portion being considered to be either superabundant, or at all events less intimately blended, and therefore more readily separable from its other constituents; whereas the opposite party deny that the change in the blood is invariable and uniform, and regard rheumatism as simple inflammation of the articular fibro-serous textures, which may be limited to one joint, or may effect several at a time, in consequence of the very intimate sympathy which exists between every part of the sero-fibrous system. It is not our intention to enter upon the discussion of the respective merits of these two doctrines, nor yet to analyse the leading phenomena of the disease: At present we shall confine our remarks to the consideration of an occasional symptom, which of late years has drawn the attention of many medical authors, we mean the irritative affection of the heart. When a rheumatic patient is seized with this affection, he experiences deep in the cardiac region sharp shooting pains, and at other times a dull and constant uneasiness, varying indeed in different cases, as to severity and as to the exact seat of the distress.

These feelings are usually accompanied with an irregular tumultuous action of the heart; its pulsations are so much more rapid and more forcible than in health, that if the ear be applied for the purpose of auscultation, the physician may be much inclined to suppose that the organ has already become hypertrophied. In by far the greater number of cases, the symptoms now enumerated cease after a few days continuance, and then it will be found that the heart when examined with the ear, has resumed its natural tranquil state.

What is the nature or cause of these cardiac pains? Most medical men will answer that they are essentially rheumatic and depend upon a rheumatic affection of the substance of the heart itself. The advocates of the humoral etiology of the disease explain the occurrence of the cardiac pains, 'en disant que, puisque cet organe (le cœur) est penétré d'un sang altéré, il n'y a rien de suprenant qu'il eprouve une affection semblable à celle qui sevit sur les articulations,' whereas the solidists attribute them to a sympathy of the heart with the other parts of the muscular and serous systems, and to a consequent metastasis of the morbid act from one part to another. It is to be observed, that although we have classed together the muscular and serous systems, we believe that rheumatic affections of the heart are very generally seated in the membranous, and not in the fleshy tissue of the heart; in short that pericarditis is infinitely more frequent than genuine carditis. Reasoning a priori might have led to the same conclusion, on the ground that in acute rheumatism the fibrous tissues of the joints are much more commonly affected than the surrounding muscles, and that therefore the membranous investitures of the heart would more probably be involved in a translation of the disease, than the muscular fibres.* The rapid disappearance of the disease, and the very speedy cessation of all the cardiac symptoms, coupled with the occasionally obscure character of these, while they last, lead us to the same conclusions.

In reference to the treatment of acute rheumatism, Dr. Barthelemy (author of this communication), who is an assistant in Broussais' Hospital, the Val de Grace, seems to suppose that the only genuine and heroic remedy against acute rheumatism is the detraction of blood; and discarding therefore the consideration of the other curative means, he limits his remarks to the enquiry, whether general, or local bloodletting is most beneficial in this disease. The modern humoral (using this epithet in the meaning explained at the beginning of this paper) pathologists prefer the former practice, while the 'medecins physiologistes' have much more faith in repeated leechings. M. M. Roche and Bouillaud are in the habit of bleeding their patients, three, four and five times successively, and at each time to the amount of 16 or 20 ounces: one 'pauvre malade,' who had the misfortune to be cured of acute rheumatism by eight copious venæsections, seems to have excited in an especial degree Dr. B.'s sympathy: he went, he tells us, to see him from mere curiosity (a curiosity which reminds us of that of the Scotch judge, who in fun condemned a prisoner, "that he might see how the b——r would look!"); 'selon toute apparence, il a dû rester foible et decoloré pendant plusieurs mois, &c.' Dr. B. although hostile to the heroic use of the lancet, approves of one or two general bleedings in most cases of acute rheumatism, and follows up this antiphlogistic treatment by repeated leechings. This is the treatment which has been adopted with such siganl success by MM. Piorry and Broussais.

On perusing a subsequent number of

---

* It is altogether a most gratuitous assumption, and an assumption too, which is contradicted by accurate enquiries, to assert that 'rheumatisme articulaire aigu' (the rheumatic fever of some authors) is seated in the muscular tissues: it is to the synovial membranes, what pleurisy is to the pleura, peritonitis to the peritoneum, &c. and indeed these latter diseases have sometimes been designated pleuritic and peritonitic fevers.—*Bouillaud.*

the same hebdomadal, we find a letter from M. Roche, in refutation of M. Barthelemy's account of the 'pauvre malade' for whom he had shewn so much sympathy: 'par miracle sans doute,' says M. R. 'il n'est resté, ni foible, ni decoloré pendant plusieurs mois; il n' a pas été bouleversé pendant plusieurs années; il n'est pas devenu hydropique; il a pu digerer des le premier jour de sa convalescence; enfin une vingtaine de jours apres sa guerison il avait repris son metier de batteur d'or.'

Among the novelties of medical literature, may be mentioned the extraordinary notion of Professor Hildenbrand of Pavia, that rheumatism is 'le resultat d'un defaut d'equilibre survenu entre la chaleur et l'ectricité du corps, et celle de l'atmosphere.' Acting on this principle, he orders all the affected parts to be well covered with 'corps idio-electriques, tels que le colon, la flanelle, le taffetas gommé, prealablement imbibés de substances resineuses.' As a matter of course, his success has been truly astonishing!!

Professor Bouillaud, also, in his recent clinical lectures, has alluded to M. Barthelemy's paper, which he says, contains some assertions respecting his practice, which are inexact and require therefore to be answered. The Professor is of opinion that M. B. has failed to adduce any proof, that general bleedings ought seldom to be practised more than once or twice in cases of acute rheumatism, or that they can be superseded with advantage by leeching or cupping; and he alludes to the results of his own clinique at the La Charité, to show that venesection, even to the sixth or seventh time, is by far the speediest method of curing the disease, and that such a vigorous practice is by no means usually followed 'par une tres longue convalescence, faiblesse anemie, infiltration, ni par aucune de ces graves terminaisons dont nous menace notre confrere.'

The following resume of a few cases will give some idea of Bouillaud's practice.

A patient was labouring under severe rheumatism of one knee, when he applied for relief. He was twice cupped each time to the amount of 12 ounces, and had 30 leeches applied over the joint; all in the course of three days: compression and mercurial inunction on the part was then employed, and the treatment 'fut terminé' by another ample leeching: the cure was complete in 17 days.

In the second case, the man had suffered for eight days from rheumatism of the right foot, left knee and right shoulder: He was bled, 'coup sur coup' three times, and cupped once (3 palettes, or about 12 oz. at each time); then compression and mercurial frictions were used:—cure in six days.

The third case was that of a young man, in whom the affection was fixed in the two wrists: it was 'd'une extreme tenacité;' for in spite of being bled from the arm seven times, and being also leeched and cupped, not to mention the use of baths, narcotics, internally and externally, mercurial frictions and compressions, 'il n'etait pas completement gueri lorsqu'il demanda sa sortie, apres trois semaines de sejour à l'hopital.' The Professor very adroitly adds "que le rheumatisme aigu fixé aux poignets, est plus rebelle au traitement que partout ailleurs.'

A man had experienced an attack of general rheumatism for some time before his admission into the hospital; the complaint remained fixed in the right wrist and left knee. On the first day he was bled to twenty oz. and on the following two days, to 12 oz. each time. On the fifth day, after his admission, 'il etait deliveré des toutes ses douleurs, qui n'ont pas reparu.' The fifth patient was bled twice, and had 20 leeches applied: cure in eight days.

The sixth patient was bled twice, and also cupped twice: cure in 12 days.

The seventh, a healthy and plethoric woman, affected with general acute rheumatism, was bled 7 times, (8 oz. each time) in thirteen days, and was cured by the 16th day.

Such are the data, (selected from an immense number of analogous cases) by which Professor Bouillaud attempts to prove the speedy and decided efficacy of vigorous depletions of blood against acute rheumatism. —*Journal Hebdomadaire.*

## ON THE INSECT OF THE ITCH — (ACARUS SCABIEI.)

The "chasse" of this most despicable vermin was, some two or three months ago, an all-absorbing occupation of the medical savans in that most enlightened city of the world, Paris—la belle Paris. The ardour of the huntsmen was quite commensurate with the importance of the game; many a microscope was bought, many an eye was strained in this great emprise, and many a pen was wielded, to tell all the wonders seen or imagined. Every journal teemed with descriptions and counter-descriptions, with notes of discoveries, letters of reply, reclamations, criminations, justifications, and a host of other *ations*. Take up a number of any of the French medical periodicals for the months of Sept. Oct. or Nov. and sure will you find the words "acarus scabiei," "acarus de la Gale," staring you half-a-dozen times on the wrapper page! We must frankly confess that, whenever we met with these ominous titles, we laid the number aside for the time, having no confidence in being able to give any thing like a "Periscopic review" of the multitudinous reports and descriptions. At length this labour has been done for us, by no less important functionaries than the members of the council of the Institute, and is embodied in the following report of Messrs. Blainville and Dumeril (two of the best comparative anatomists in Europe), on the various memoirs presented to the Academy by MM. Renucci, Beaude, and Sedillot, the three most zealous investigators.

Although several species of acarus were recognized by Aristotle and other ancient authors, and although the itch was certainly quite well known to the earliest physicians of Greece, it is somewhat singular that the first notice of the "acarus scabiei" is to be found in the writings of an Arabian physician, Avenzoar, who lived in the twelfth century. "There is (says he) a thing known by the name of 'soab,' which feeds and gnaws on the integuments, and when it becomes exposed, there escapes an animal so minute as to be almost imperceptible." In the Latin translation of Avenzoar's work, which was published at Venice in 1494, the author is made to use a more definite expression than he himself probably intended; for the Arabic word which signifies "a thing," "a substance," is translated "pedicelli parvunculi."

In 1657, Scaliger mentions the "acarus scabiei" in very distinct terms. "In describing (says he) the acarus of Aristotle, it is worthy of notice, that it is called by the Paduans "pedicello"—by the Tunisians "scirro," and by the Gasconese "brigant." It is of a globular form, and is so small that it can only with difficulty be recognized. It lodges under the epidermis, and causes a burning or stinging pain in the part; when extracted with a needle's point, and placed on the nail, it exhibits slight movements, especially if it be exposed to the rays of the sun—if quashed between two of the finger nails, "on entend un petit bruit, et on en fait sortir une matière acqueuse."

Most of the physicians of those days received this description as true; and whenever they alluded to the itch, they invariably attributed its immediate cause to the existence of these acari. Aldrovandus is still more explicit and minute in his history:—After having described two species of acarus he adds—"recent authors have recognized a third species, called "scirro" or "pedicello;" it lodges under the integuments, creeping between the epidermis and the true skin, hollowing out sorts of sinuous galleries, and causing numerous vesicles on the surface. If one of these vesicles be opened, there escape animalculæ, which are so minute, that 'de tres bons yeux, et une vive lumière,' are quite necessary to see them. Nothing shows more satisfactorily the current belief of the existence of the itch insect, than the definition of the word 'pedicello,' given in the Della Crusca Dictionary, published in 1612; for the editors have quoted a verse from the works of a contemporaneous poet, who said—"per fare nessuna ingiuria ai pedicelli, egli sempre ebbe cura di portare i guanti." It was the reading of this passage which induced Dr. Bononio, of

Venice, to write a memoir, descriptive of the appearances of the insect under the microscope, and to have drawings of it made, which were, indeed, the first ever published.

Muller has given a short notice, and an engraving of the acarus, in the Acta Eruditorum; and so, also, has Dr. Mead, in the Philosophical Transactions for 1702. Linnæus mentions, in his Fauna Suecica, the acarus scabiei, and designates it by the appellatives "humanus and subcutaneus;" he has stated that it is to be sought for, not in the pustule itself, but rather at its edges, under a certain spot where it lies concealed, the ova only being in the pustule. Geoffroy, in his Histoire des Insectes des Environs de Paris, 1762, repeats nearly the same description, and Morgagni tells us that he, on one occasion, extracted from a scabious vesicle several exceedingly minute whitish globules, which he found to be "de veritables acari." M. Latreille, in 1806, proposed to establish a new subgenus, under the name "sarcopte," for the reception of the acarus scabiei; but it is proper to mention, that he trusted to the correctness of the descriptions given by other authors, and had not satisfied himself by personal examinations.

In 1812, M. Gales, chief apothecary to the Hôpital St. Louis (into which all the "galeux" of Paris and its environs are admitted), availed himself of the extensive opportunities he possessed of determining the accuracy of preceding accounts; and he drew up a memoir descriptive of his observations. Many of his experiments, we are told, had been witnessed by several medical men, who all "avaient pu voir le ciron de la Gale." Not satisfied with this concurrent testimony, M. G. showed, by an experiment made on himself before the commissioners, who had been appointed by the General Council of the Hospitals, that an acarus, placed on the skin of his arm, caused an eruption of pustules of genuine psora. From the date of this memoir until 1829, the descriptions and drawings of M. Gales were universally received as authentic, when, lo and behold, M. Raspail (*see* the Annales des Sciences d'Observations pour l'année 1829) detected that the figures of the acarus scabiei, which M. G. had published, represented, not this species of insect, but the common mite of cheese!! Once more, therefore, the very existence of the acarus scabiei was doubted, and most of the physicians in France were inclined to accede to M. Raspail's opinion—"that the parasitic animal of psoric pustules is only of occasional and accidental occurrence:" and we find that the Baron Alibert, in his treatise on Cutaneous Diseases, published in 1832, states—'que peutetre les acarus ne sont propres qu'a une espece de gale et â l'idiosyncrasie des sujets, et que, peutetre, ils ne paraissent que dans certaines années, et specialement dans certains climats.' This very qualified and hesitating statement of the chieftain of the "dermatophiles," very distinctly implies his great doubts if there be an acarus scabiei at all; the "peutetre" is a most unsatisfactory word, and, indeed, we find, on perusing M. Renucci's paper, that the Baron "manifestait de doubtes sur la possibilité de trouver facilement l'animalcule." Such was the uncertainty of opinions last August, when M. Renucci undertook to demonstrate the much-disputed problem. It will be amusing to the English reader to follow the sketch he has published, in a late No. of the Revue Medicale. We are informed that he is a native of Corsica ("à laquelle je suis fier d'appartenir"), where the itch luxuriates most abundantly; "elle est une maladie endemique dans ce pays, dont elle est, je dirais, presque le fleau." The women of the place are very expert in extracting the acari, or, as they are called there, "pedicelli." Mr. R. watched them doing this operation, and at length acquired great dexterity himself. On going to Paris, he was surprised to find that the medical savans of the metropolis were really quite ignorant of what was so well known in his "chère patrie." He, therefore, undertook to enlighten them, and one of the patients in the Hôpital St. Louis was selected for the purpose of his demonstration:—"J'indiquai aux assistans le point ou devait se trouver l'acarus; je leur montrai les signes qui decelaient sa presence, apres quoi, j'en fis l'extraction, à l'aide d'une epingle." So complete was the exhibition, that the acarus moved "tres bien" along M. R.'s finger-nail, and every one present could distinctly see it with the naked eye. This experiment was repeated on another itchy patient in the hospital, and with equal success. The Baron was immediately freed from all the doubts which he had hitherto held, and, with praiseworthy speed, set himself at once to "dresser un proces-verbal de cette séance," which was forthwith signed by all the spectators. Many of the pupils speedily acquired as great cleverness at extracting the pedicelli as any of the Corsican ladies.

The only instruction which it is necessary to give to the young huntsman, is to look for, at the base of the vesicles (which must be entire, and not have been subjected to any treatment), the small grooves or furrows "qui se dirigent en differens sens;" these furrows are either directed towards the apex of the vesicles, or they pass round its base, and at other times they diverge from the base into the adjacent skin. At the extremities of these furrows, most remote from the vesicles, white spots may frequently be seen with the naked eye; at these spots, the epidermis will be found to be slightly elevated, and it is there that the hinder parts of the animalcula are lodged. In warm countries, a brownish-coloured spot may sometimes be perceived beside the white one ,and this, we are told, indicates the position of the head of the acrus. Whenever either of these spots is seen at the extremity of the furrow, we may almost always calculate on finding an acarus beneath; and all that is then necessary for its extraction, is to insert the point of a needle and drag the enemy out. To unpractised eyes, it looks like a grain of flour, or a minute portion of the epidermis itself; if it is uninjured by the needle, and placed on the finger-nail, it will frequently, after a short time, exhibit signs of life, and speedily "ne tardera pas se mouvoir et à marcher avec assez de rapidité, pour qu'on soit obligé de le maintenir sur cette surface, de peur qu'il ne s'echappe." In conclusion, M. Renucci adds that the acarus is found frequently at the base of the vesicle, sometimes on its sides, but very rarely or almost never at its apex; and that it has been from ignorance of this circumstance, that the attempt to discover has so often failed. —*Journal Hebdom. et. Rev. Med.*

## MEDICAL STATISTICS OF ALGIERS.

M. Maillot, the principal physician of the Military Hospital at Bon, in Africa, has published an abstract of the cases treated there during the month of June last, and has added some remarks on the prevalent disorders of the climate. At the beginning of the month, there were 237 cases in the hospital; during its progress, 935 cases were admitted, and, at the end of the month, 819 remained under treatment. The number of new cases exceeded considerably that of the corresponding period of the preceding year; and this increase was, no doubt, attributable to the earlier and greater heat of the present season. The prevailing malady was intermittent fever, which generally assumed the quotidian or the tertain forms. Of continued diseases, the most frequent were very acute "gastro-cephalitis," "irritations gastro-cephaliques febriles," and "colites dysenteriques." M. M. observed that the intermittents had become gradually more and more masked and complicated with cephalic or enteric disturbance, or with both, since the commencement of the hot weather. During the Spring months, they were distinctly marked, the paroxysms and intervals being well contrasted with each other; but, as the Spring and Summer approached, they assumed more and more of a remittent, and subsequently of a continued form. Out of 134 cases of ague, treated during the months of February, March, and April, there were not fewer than 56 cases, in which no traces of encephalic, pulmonic, or gastro-intestinal disease could be discovered; whereas, in 64 cases treated during the month of May, there were only five which could be called truly simple, or uncomplicated with some local mischief either of the brain, or more frequently of the bowels.

In the following month, the same medical constitution prevailed; for, out of 162 cases of intermittent fever, only 18 were simple, and in all the rest there were distinct and well-marked affections of one or other of the three great visceral cavities. It is also worthy of notice, that, in addition to the greater frequency of such complications, the severity of these complications was found to increase, as the Summer heats advanced: the corresponding affections having more of a merely irritative character during the early spring months, and much more of a decided inflammatory character during the months of May and June. "C'est ce passage d'un degré leger d'irritation à un degré plus elevé, qui constitue le danger des affections du mois de Juin; c'est la congestion irritative, brusque, violente des principaux viscères qui fait passer ces fievres de l'etat de simplicité à un etat toujours grâve—souvent mortel; ce sont ces redoubtables phenomènes qui, portés au summum, leur valent le titre de fievres pernicieuses."

As might have been expected, the pulmonic affections were more prevalent during the early spring months, and the gastro-intestinal and the cephalic (these two latter being very generally associated) during the Summer ones. Whoever considers the facts now stated, cannot hesitate surely, to admit that the remittent and continued fevers of the hot season, in such a climate as that of the northern coast of Africa, are, in truth, intermittent fevers, complicated with a local mischief, which has the effect, sometimes, of merely obscuring the features of the original disease, and, at other times, of masking these altogether, so that they cannot be recognized.

Dr. M. observed that, almost invariably, every case of remittent fever, if seen at the earliest invasion, set in with one, two, or more paroxysms of genuine ague, the interval or intervals being well marked; and that, therefore, it was not for some time "que la reaction circulatoire ne tombat plus, il n'y avait plus d'intermittence." Moreover, the exacerbations were generally so violent, and so regular in their recurrence, even when the remittent type was once fairly established, that no doubt could be entertained of their essential or primitive nature; they were, in short, the paroxysms of an ague, which had lost its intervals of apyrexia. When the internal mischief is still more extensive and severe, the remissions of the feverish disturbance are less obvious, and the disease, no longer exhibiting those alterations of abatement and increase which characterise remittent, and more especially intermittent fevers, becomes what is called a continued fever. Even in epidemics of what are considered to be, essentially and primarily, continued fevers, it is not unfrequent to meet with cases which partake greatly of the character of remittents; but we do not mean to infer from this, that the two orders of fevers are invariably more or less associated with each other. Our present remarks are only intended to prove that, whenever a remittent fever assumes a continued type in its progress, we may be quite satisfied that some internal lesion has become more fixed and alarming.

As to the treatment of his patients, Dr. M. assures us that he has derived great benefit from having his mind constantly impressed with the preceding views:—He says, "c'est de l'idée qu'on se formera de ces intermittentes, de ces remittentes, et de ces fievres continues se succedant tour à tour, se remplacant, se chassant, puis reparaissant, tournant, pour ainsi dire, dans le cercle annuel; c'est de la filiation, que l'on verra ou non entre ces maladies si diverses en apparence, si identiques pour le fond, que dependra le choix d'un traitement vrai ou faux." In the uncomplicated intermittents, such as were generally observed in the early spring months, the lancet and the sulphate of quinine were almost invariably sufficient to effect a speedy cure. The depletion of blood, varying in amount, according to the constitution of the patient and the severity of the pyrexial symptoms, was always found to be a most useful preliminary. Whenever any of the great internal cavities was unusually oppressed, or otherwise disturbed, the application of a number of leeches near to the suffering part never failed to produce speedy relief. No sooner was the circulation calm and equalized by these means, than the use of the quinine was at once commenced, in large and frequently repeated doses. In the remittent, and also in the continued cases, the same line of treatment was pursued; but it required a nicer discrimination to determine the exact time at which the quinine was proper. As a general remark, however, we may state that, "toutes les fois qu'on a put saisir les moindres indices de remittence, on doit recourir au sulphate de quinine." The grand objects to be kept in view are to prevent, as early as possible, the return of the paroxysms, and to obviate or to remove congestions of blood in any of the great cavities. It was observed that every paroxysm added more and more to the risk of organic lesion, in some of the viscera, from a mere irritative congestion to inflammation, and subsequent disorganization of tissue. These are the mischiefs which are the source of the obstinate diarrhœas, the "colites," the dropsies, and the gorged livers and spleens, which are so common after epidemics of intermittent fevers.

In conclusion, we may repeat that the prevailing type of the fevers, at and in the neighbourhood of Algiers, is primarily and essentially intermittent; and that these fevers have a disposition to assume a remittent and continued form, in proportion as there is the tendency to visceral disease, whether this tendency arise from the constitution of the patient, or from any extraneous cause, such as the increase of the Summer heats, exposure to currents of cool air, &c. By keeping these principles steadily in view, the success which attended Dr. M.'s exertions was most gratifying. By bringing back, as it were, the remittent and continued fevers to their original type, viz. that of regular ague, in the manner we have already explained, and by the then bold use of the specific, most of the cases were led to a favourable issue.—*Journal Hebdomadaire.*

---

## TREATMENT OF AMENNORRHEA, BY IRRITATION OF THE MAMMÆ.

'Docet doctrina sympathiæ non semper ad partam affectam remedia esse dirigenda' is an axiom of frequent practical interest to the medical philosopher in the treatment of disease. It is well known that certain parts, or organs, situated at a distance from each other, and having no direct bond of union, either by blood-vessels or nerves, are yet so intimately associated with each other in the performance of their functions, that whenever one of these becomes diseased, or in any way deviates from the state of health, the other almost immediately suffers, from the operation of that mysterious law, which has been called sympathy.

Nowhere are these phenomena so striking or so uniform in their occurrence, as in the case of the uterus and the mammæ. The affections indeed of the latter organs are seldom quite idiopathic, or independent of some uterine malady, and hence the paramount importance of attending to the state of the generative organs, whenever the mammæ are threatened with, or involved in disease. Hippocrates was well aware of this intimate sympathy, when he recommended the employment of dry cupping to arrest sanguineous discharges from the uterus, a practice, which may not unfrequently be resorted to with decided advantage. Within the last twelve months Dr. Rigby of London has published some cases in the Medical Gazette, establishing the utility of applying the infant to the breast to arrest puerperal menorrhagia.

Drs. Loudon and Patterson have the merit of having first extended the same therapeutic principle of mammary irritation to the treatment of amennorhœa; the former by the persevering use of one or two leeches daily to the mammæ for several weeks, the latter by the application of sinapisms and other epispastics to these organs. The following two cases are corroborative of the correctness of their opinions.

A young woman, 21 years of age, fair, and of a very delicate constitution, consulted Dr. Mondiere, for a tumor in the right mammæ. It was of the size of a walnut, firm, even on the surface, and painful when pressed. She attributed it to a blow she received on the breast, three years before. The catamenia had not been seen for upwards of a year and a half.

During six months she had been treated for this amenorrhœa, by leeches to the vulva, and by various emmenagogue medicines; but without avail. Dr. M. advised the repeated application of leeches to the mammary swelling; but as this advice was not followed, he satisfied himself with prescribing frictions with iodine ointment, and the use of emollient cataplasm. This treatment was continued during two months, but without much advantage. Dr. M. therefore had recourse to 'un moyen tres peu connu;' viz. 'la succion souvent repetée du mamelon.' The gentleman, with whom the girl 'entretenait des relations' performed this delicate office, and he succeeded so well, we are told, that the mammæ very soon began to swell and be painful, and the nipple became red, extremely sensitive, and was in a state of almost constant erethism. So tender was the whole organ, that the suction required to be discontinued for some days. When the tenderness subsided, the suction was repeated with the same result as before. In the course of a few days, the catamenia made their appearance. At this time the breast was hard, swollen and painful, the nipple very irritable, and the whole organ so sensitive, that the gentlest pressure caused severe suffering. The tumor of the mammæ however did not receive any benefit from the treatment now explained.

In the second case, although there was not indeed any deficiency or irregularity of the menstrual flow, the effect of leeching the mammæ, on this discharge, was so striking, that the particulars deserve to be mentioned. A young married lady had a tumor in the left breast: it had existed for upwards of two years. During this period she had repeatedly applied to the tumor a few leeches at short intervals of time; and she had invariably observed that 'pendant l'application de ces annelides' the catamenia were not only much more abundant than they had been before, but also that they returned every third week. The tumor was at length extirpated by M. Lisfranc, and proved to be a fibro-serous cyst.

The third case was treated by Dr. M. in the manner recommended by Dr. Patterson (whose observations our readers will find at page 171 of the Med. Chir. Review, for Jan. 1834.)

M. R. aged 21, of a feeble constitution, had menstruated for the first time, when she was 19. During the first year, the catamenia were very sparing, irregular in their return and accompanied with head-ache, and general indisposition, which obliged her to keep her bed for two or three days. A sudden fright suppressed them altogether, and for upwards of six months, there was no appearance of any discharge. Her health had declined, and when she consulted Dr. M. in June last, she was in a state of chlorotic marasmus.

He recommended that just before the expected time of the catamenial discharge, a small sinapism be applied on the outer half of each mammæ, and kept on until some irritation was induced. On the day following the application, the menses appeared, and continued for 24 hours. The mammæ were for the space of two days, swollen and inflamed on the surface. At the next monthly epoch, the sinapisms were again used, and with still more decided advantage; for the catamenia this time continued for three days. In August and September, they returned regularly, although no means were used.—*Journ. Hebdomadaire.*

---

### TREATMENT OF ERECTILE TUMOURS (ANEURISMS BY ANASTOMOSIS) BY CAUSTICS.

Until the publication of a very valuable paper in the Medico-Chirurgical Transactions by Mr. Wardrop, surgeons entertained great fears of applying any form of caustic to these bloody swellings, and even in the present day, despite of many successful cases recorded by Mr. W. as well as by other English surgeons, there appears to be a strong prejudice against this mode of treatment on the Continent under any circumstances.

M. M. Boyer and Begin decidedly condemn it, and Professor Roux restricts its employment to the cases in which 'les tumeurs erectiles sont tout-à-fait superficielles, et assez peu developpées pour qu' on puisse les detruire par une seule cauterization;' he adds, 'mais dans toute autre circonstance, l'infidelité et incertitude de ce moyen, auquel d'ailleurs on n'a eu qu' assez rarement recours, doivent le faire proscrire entierement, d'eutant plus que l'instrument tranchant, beaucoup plus sur, serait applicable à tous les cas ou l'on pourrait cauteriser.' M. M. Maunoir and Velpeau have recorded nearly the same sentiments.

Callisen in his System of Surgery, has these words; 'nævi parum prominentes caustico admoto consumuntur; sed majores nævi ferro exsecandi sunt;' but it is unquestionably to Mr. Wardrop, that the merit is due of having established the efficacy of the treatment by caustics, in certain cases of nævus. The first case in which he employed it, was that of an infant 13 months old; the nævus was situated on the middle of the forehead, and was not much larger in its disc than a sixpence. A rod of the kali purum was rubbed on the centre of the nævus, until the skin became of a deep brown colour. The eschar gradually separated, and a complete cure was effected in three weeks.

Another nævus of equal dimensions, on the cheek, was treated in the same manner, and with the same success. In a third case, the tumor was of much larger size, and affected the cheek and lips. Mr. Wardrop applied the caustic to different parts of the nævus successively, and effectually destroyed the whole disease in the course of a month. This case had been considered of very unfavourable prognosis by many surgeons, who had seen it, before the treatment was commenced. The fourth example was still more remarkable.

A child, two years of age, had a large pulsating erectile tumor, on the front of the thorax, a little to the left side of the sternum. The application of the caustic required to be very often repeated, in order that the whole mass might be effectually destroyed. This treatment was persevered in for nearly five months; the suppuration was at one time very profuse, but this could be always moderated by applying the balsam of Peru; and fortunately no hæmorrhage occurred at any period. The cicatrix many months after the cure was complete was found to be firm although highly vascular: this vascularity however appeared to be rather venous than arterial.

Dr. Lee has followed the example of Mr. Wardrop, in two or three cases of nævus; in one, the tumor of the size of a small egg was situated on the fronto-parietal space of a young infant; it pulsated strongly (the pulsations were partly attributable to the movements of the brain), and more than once the skin had broken, and a quantity of blood been discharged. Dr. L. fearing that the swelling might be connected with the dura mater, used the caustic with great caution; the applications were made, at short intervals, for many months: but at length a complete cure was obtained, and this was the more satisfactory, as the situation of the nævus had precluded other modes of treatment. In a second case, the cure was much more speedy, in consequence of the caustic having been more freely used; the swelling was originally of the size of a walnut, and occupied the vertex of the head. The cicatrix was white, smooth, and shining.

Mr. Higginbottom, of Nottingham, has published in the Medical Gazette two cases of congenital nævus, cured by the application of the potassa fusa. In the first of these, the nævus, of the size of a walnut, and situated on the left side of the inferior maxilla, was gradually becoming larger and larger; one free application of the caustic, according to the method proposed by Mr. Wardrop, was sufficient for the removal of the disease. In the other case, the nævus occupied the left wing of the nose; five applications of the caustic were necessary for its removal—the cicatrix which remained was scarcely perceptible. Mr. H. has succeeded in other two cases, the particulars of which have not, we believe, been yet published.

It will, no doubt, be remarked by the reader of the preceding observations, that all the cases now recorded occurred in very young children; to them, Mr. Wardrop's treatment is especially well adapted, as the application produces but little pain, and a very trifling constitutional disturbance; the application may be made while the child is asleep, and will often not even awake it. The chief objection is the slowness of the progress, and the tedious delay which is necessary in some cases. It is to be remembered, however, that the cauterization of the whole diseased surface is not always requisite; for even a single application to one point of the nævus has succeeded in numerous instances; and Mr. Higginbottom alludes to a case, which occurred in his practice, where he did not see his patient for several weeks after he had applied the caustic for the first time; and, when the child was brought to him again, he found that the disease was very rapidly subsiding: eventually it completely disappeared, although no further medication was employed.

A most interesting case of an erectile tumor, in the genital organs of a young woman, was recently admitted into the Hôpital Necker, at Paris. The tumor was situated immediately beneath the urethra, extending upwards into the vagina for some distance—when pressed with the finger, the patient felt a good deal of pain. M. Laugier applied the potassa fusa to the centre of the swelling; a slight oozing of blood took place. Without waiting for the separation of the eschars, M. L. repeated the cauterization twice; the tumor was soon reduced to half its original size, and felt to the finger much firmer and denser than it was at first. It was now discovered that this girl was pregnant; and, unfortunately, she left the hospital before the cure was completed, although no doubt could be entertained of the final success of the treatment. In concluding his memoir, M. Tarral alludes to the use of the caustic in some cases of hæmorrhoids, and also of varicose veins of the legs; and he is inclined to prefer this mode of treatment, in varicocele, to the ingenious plan recently proposed by M. Breschet, of obliterating the enlarged veins by means of pressure. The authority of the distinguished Prussian surgeon Baron Graefe, may be adduced in favour of the treatment of some nævi by cauterization; but, instead of using the potassa fusa, he employs the heated iron.—*Archives Generales.*

---

### PARTIAL OSSIFICATION OF THE MUSCLES OF THE SHOULDER, IN YOUNG MILITARY RECRUITS.

Although every surgeon of an infantry regiment must have witnessed many cases of a partial ossification of the deltoid of the left shoulder (in consequence of the pressure of the musket on this part) in soldiers, it is rather singular that, with the exception of Kuhn, of Potsdam, and Richter, of Dusseldorf, no author has published any account of this bony transformation. Dr. Hasse, in a paper recently published in the Transactions of the Physico-Medical Society at Kœnigsburg, states that, in examining 600 recruits, who had entered the service within the preceding twelvemonths, he met with eighteen cases of this affection; the size of the ossific deposit varying from that of a pea to that of a goose's egg, and its consistence from that of a stiff jelly to that of perfect bone. The earliest sign of the disease is an inflammatory swelling, red on the surface and painful, an inch or two below the coracoid process of the scapula, and exactly at the point where the stock of the musket rests.

The soldier usually washes the part with a spirituous wash, and this has the effect of dispersing, indeed, the superficial inflammation, but very often of driving it more inwardly, till it penetrates to the deepest muscular layers of the deltoid, biceps, and pectoralis major, and assumes that peculiar action which occasions a deposition of osseous matter in the muscular tissue. The stages of this process may be considered as three: in the first, a small tubercle, like a gland, may be felt, moveable under the skin—in the second, this tubercle becomes larger, and acquires a cartilaginous consistence; and lastly, after a lapse of two or three months, when the degeneration has become complete, the deposit has all the firmness and hardness of bone. It will be readily conceived that the degree of lameness of the extremity will vary in different cases, according to the extent of the morbid change, and the exact position where it has taken place.

Pieces of bone, from three to five inches long, and one or two in thickness, and weighing from two to eight drachms, have been extracted; they are usually of an irregular shape, broader above than below, and rough on their surface. Kuhn once found a foramen for the passage of a bloodvessel through a piece which he had excised. If the transformation into bone has not been complete, we have often a most distinct illustration of the different stages or phases of the ossific process, from the change of the muscular fibres into a cartilaginous silvery tissue, and then, from this, into a substance which is porous, and exhibits osseous spiculæ at different points. When once the ossification is complete, "on trouve parput, meme apres une maceration antereure, un veritable tissu osseux, garni de pettites cellules, et recouvert en haut d'une couche en partie tendineuse, et en bas d'une couche musculaire." The extirpation of these bony masses is sometimes very troublesome and tedious, in consequence of their adhering closely and very intimately with the surrounding muscular substance.—*Observateur Med. Belge.*

---

## POISONING WITH CORROSIVE SUBLIMATE.

The three children, whose ages were 7, 3, and 2 years, of Mad. Nelissen, during their recovery from the measles, were ordered by the attending physician to have some powders of the protochloruret of mercury (calomel); the eldest child was to take eighteen grains—the second twelve grains, and the youngest six grains. The mother, having previously mixed each powder with some sugar, and dissolved it in a spoonful of water, administered it to each of her children their respective doses. No sooner had the eldest child swallowed rather more than one-half of his medicine, than he was seized with retching and vomiting; but, as these were supposed to be the effect only of the repugnance of the child to taking physic, the remainder of the dose was immediately given. The distress of the stomach became speedily aggravated, and was accompanied with convulsive movements of the body, and with copious alvine dejections. The "pharmacein" was summoned two hours after the accident, and he directed that the child should drink a quantity of milk, with the whites of two eggs beaten up with it. In the course of an another hour, the little patient, after having suffered extreme agony, succeeded by a state of exhaustion, and by occasional convulsions, expired.

The second child, immediately upon swallowing his dose of twelve grains, was attacked with violent vomitings of a bloody fluid, and these were speedily followed by purging, and then by a tendency to stupor, which was every now and then interrupted by excruciating pain in the bowels, and by desire for stool. The youngest was affected in a similar manner, and died in eleven hours after the exhibition of the medicine.

These melancholy accidents could not fail to suggest the probability of an acrid poison having been swallowed by each of the children; and the suspicion was increased by the circumstance of the tin spoon, in which the powders had been dissolved, having become of a brownish-black colour. On applying to the chemist, at whose shop the prescription (which was found to be written most legibly and correctly),* it was at once discovered, that his pupil had used the corrosive sublimate instead of calomel. The sufferings of the second child were protracted until the twenty-third day after the accident, at which time he died, with all the symptoms of an obstinate enteritis. The following account of the post-mortem examination of the bodies of the other two children had been drawn up by Drs. Ollivier and Barruel, who were charged by the "Procureur du Roi" to make an official report.

The corpses had none of the usual rigidity of death: the limbs were flaccid—the bellies were enormously tumefied—the epithelium of the mouth, pharynx, and œsophagus was, in several places, soft, white, and could be easily detached by the handle of the scalpel. The mucous surface of the stomach and bowels exhibited patches of acute inflammation, and here and there of partial erosion; at these places, its colour was of a deep brown, or of an eschar-like hue. On the inner surface of the left ventricle of the heart, in the elder child, there were observed two patches of distinct ecchymosis, caused by the effusion of blood between the investing serous membrane and the muscular tissue. In the younger child, also, a similar appearance, but less distinctly marked, was found. [It is worthy of notice that Orfila, in his "Toxicologie Generale," has alluded to his having seen this phenomenon in several of his experiments on animals.—Rev.]

*Chemical examination.* The spoon in which the powders had been given, was first examined. On being immersed into a measured quantity of pure distilled water, the brown-coloured coating, with which it was lined, gradually separated and formed a sediment at the bottom of the glass. The water was decanted off; and, being treated with the "acide hydro-sulphurique" (sulphuretted hydrogen), it yielded a dirty, yellow-coloured precipitate, insoluble in some drops of ammonia. An excess of nitric acid was added to the water, and the mixture boiled for one hour. On applying the nitrate of silver, a white, curdly precipitate, insoluble in nitric acid, but readily soluble in ammonia, was immediately formed. This experiment proved that the substance, which had been held in solution by the water, was a metalic chloruret.

The brown deposit from the spoon, being carefully dried, and examined with a magnifying-glass, was found to exhibit numerous spiculæ of a silvery brilliancy; and, when it was triturated with a glass rod, quicksilver-like globules could be at once perceived. It was then introduced into a test-tube, the open end of which was, by means of the flame from a blow-pipe, drawn out into a capillary bore, and a gradual heat applied to the larger end, where the brown powder was, with the precaution of inclining somewhat the tube to the horizontal position. The powder was speedily volatilized, and the cool surface of the tube became coated with numerous resplendent metallic globules, evidently those of mercury, and which were proved to be so by dropping them on a plate of gold, on which they immediately formed a white amalgam. The tube was broken, and the residue of the brown powder, being collected, was treated with pure nitric acid, which readily dissolved it with considerable effervesence. This solution was divided into three portions, and these three portions were respectively treated with a solution of sulphate of soda, with the "acide hydro-sulphurique," and with the chloruret of potass: the first yielded a white precipitate—the second a black one, and the third a yellow one. These experiments proved, that the residue of the brown powder in the tube consisted of lead, which doubtless had been derived from the pewter spoon.

To render the examination of the spoon still more conclusive, the synthetic method was resorted to after the analytic. A few grains of the corrosive sublimate, being mixed with sugar, were dissolved in water held in the spoon, after it had been well scoured; its surface became immediately blackened, and when allowed to dry, and immersed in distilled water, the same appearances as those reported above, were in every respect repeated.

---

* We suppose that the term "protochloruret" had been used—a most dangerous refinement.—Rev.

We shall now proceed to describe the analytical examination of the contents of the stomach and bowels. It has been already noticed, that a considerable quantity of milk, and the whites of several eggs, had been administered to the eldest child by the druggist, who had been summoned to her relief. Orfila recommends the use of these two articles, as the most powerful antidotes against corrosive sublimate by depriving it of a portion of its chlorine, and thus converting it from the deuto into the proto-chloruret, or calomel. It became, therefore, a question of much interest to determine, whether this counteracting effect had really taken place in the stomach. But, first of all, it was necessary to examine the fluid which was found in the stomach, and the water used in cleansing it: these having been filtered, so as to separate all the solid matters mixed with them, were treated with a concentrated solution of sulphuretted hydrogen; but they exhibited no change of colour, nor did they yield any precipitate. From the result of this experiment, we inferred that the death of the child had been caused by a metallic poison; the salt was certainly not held in solution, unless, indeed, it had been all discharged by vomiting; and, in the present case, the discharges had not been preserved. The next step was to examine the solid contents; these consisted almost entirely of a soft, coagulated mass—no doubt the remains of the milk and eggs which had been swallowed.

This pulpy mass was washed with pure distilled water, and the water was tested with the sulphuretted hydrogen; but no change was induced. It was then well mixed and triturated with a solution of potassa, for the purpose of dissolving the caseous matter, and, at the same time, of precipitating the black oxide of mercury, if any calomel was really present. The solution was quickly effected; but, instead of a black precipitation, a number of yellowish flocculi were formed—on the surface of the solution, an oily matter, the buttery part of the milk, floated. The yellow flocculi, being mixed with a small quantity of distilled water, was subjected for several hours to a stream of chlorine gas: this at first caused a further separation of white flocculi; but, upon the process being continued until the water became strongly acid, all the flocculi were dissolved. The fluid was then slowly evaporated to one-half its quantity, and into it a thin plate of gold, surrounded with a spiral plate of tin, was introduced. A perceptible effervescence speedily took place, and the gold plate became whitened on its surface, in consequence of an amalgam having been formed upon it. To prove that this was really the case, the plate, previously separated from the tin one which encircled it, was put into a test-tube; the open end of this was then drawn out into a capillary bore, and the large end heated to redness. On cooling, the drawn-out extremity of the tube was found coated with numerous distinct globules of quicksilver, and the gold remained behind pure. The tin plate was treated in the same manner, and yielded the same satisfactory results.

It is unnecessary to detail the results of every step in the examination; but it is of high importance to keep in mind the proper method of conducting such an enquiry;—first, the careful washing of the contents of the stomach, and of the bowel itself, with boiling distilled water, adding, from time to time, small quantities of caustic potass; then the treating the fluid with an excess of hydrochloric acid; and, lastly, the filtering it, and introducing into the filtered fluid a gold plate, as has been already mentioned.

The result of the preceding investigation is highly instructive, as teaching us how an albuminous matter, such as milk and the whites of eggs, acts in obviating the effects of the corrosive sublimate. We do not mean to deny that it may sometimes operate, by converting the deuto into the proto-chloruret; but certainly this was not the way in the present case: and it seems to have acted rather by enveloping the acrid particles, and thus preventing it from becoming dissolved, than by causing any decomposition of its ingredients; else, how should some portion of it not have been dissolved in the distilled water, in which the curdly contents of the stomach of the eldest child had remained for several days?

We have no hesitation in impressing upon our readers the necessity of *immediately* resorting to copious draughts of milk and of whites of eggs, mixed together, whenever they are called to a case of poisoning with the corrosive sublimate.—*Archives Generales.*

## OBSERVATIONS ON SOME SUBJECTS OF MEDICAL JURISPRUDENCE.

It was our intention to have embodied, in a general review, the following extracts from M. Trebuchet's late work on "la Jurisprudence de la Medicine, &c." published last year in Paris; but, in the progress of our labours, we soon found that the work was not well suited to our purpose, from the extreme multiplicity of its details, many of which are most vague and uninteresting, and from the inextricable confusion of their arrangement. As detailed observations, they will amuse and instruct the mass of our readers.

### DEATH FROM HANGING.

The memorable case of the unfortunate Calas, who was condemned by the Parliament of Toulouse, in 1761, to the torture of the wheel, for the imputed crime of having murdered his own son, is one, among many, of the shuddering examples of error into which medical witnesses may fall. The son was found suspended from the beam over a door, which led from the shop of his father into an adjoining apartment. On the following day, the corpse (which had most improperly been conveyed to a hospital) was examined by a physician and surgeon, who without examining the cord, the fatal instrument of death, or even the room in which the catastrophe had taken place, decided, "purement et simplement," that the young man had been forcibly strangled. Four years afterwards, the innocence of the father was publicly admitted "par le Grand Conseil" and his memory "rehabilitée par un jugement definitif." There are, indeed, few cases of violent death, in which it is more difficult to determine the question whether the act has been suicidal, or been perpetrated by another, than those wherein the bodies of the victims are found suspended. In a late No. of the Gazette Medicale, is an instructive example of the perplexing circumstances which such cases may present.

A man who had become deranged some time before, was one morning found suspended from a door of a privy in the neighbourhood. The rope had been secured to the upper hinge of a door, which was scarcely five feet above the floor; whereas the body considerably exceeded this height, and the man must, therefore, have rested with the heels and toes on the ground, had not the limbs been voluntarily drawn up. Now, in this case, there was not even the shadow of suspicion that the fatal act was not strictly suicidal. In truth, all cases of death from hanging carry with them the presumption that they have been perpetrated by the individuals themselves, seeing that this is by no means a very easily effected method of murder, unless it has been committed when the victim was asleep, or otherwise stupified. Still it is quite necessary that the medical jurist examine minutely every particular of the case, as it is possible that strangulation may have been perpetrated in some other method, and the body of the victim have been afterwards suspended, for the purpose of misleading the enquiries of justice. Some authors have very properly urged the importance of examining the state of the finger-nails, and, indeed, of every part of the corpse, to ascertain whether there are signs left of violent struggles having been made by the sufferer previous to death; but it is to be remembered, that the presence of such signs is necessarily inconclusive. On the other hand, the total absence of them is strong presumptive proof of the crime having been voluntary, unless there is reason to suspect that murder had been committed before the body was hung. An instance of such a "meurtre rusé" occurred last year in Germany: the unhappy criminal confessed that she and her paramour had first strangled her husband, and then hung the body from a rafter of the roof.

It will no doubt occur to every intelligent witness, to endeavour to ascertain in a case of death from hanging, whether the victim could alone and by his own efforts have suspended himself. Supposing the body be found hanging at a considerable height above the floor, it would naturally be enquired whether any table, chair, &c. on which he might have mounted, was at, or near the spot. Professor Remer of Breslau, alludes to a case of a young man being found hanging from the slender branch of a tree, at a considerable height above the ground. No evidence could be adduced to prove that the crime had been committed by another; and the only explanation which could be offered, was by supposing that the unhappy man had bent down the branch, secured the rope to it, and that after he had put it round his neck, the elasticity of the branch had been sufficient to elevate and retain his body from the ground. The preceding considerations must satisfy medical men of the necessity of being cautious in pronouncing any very positive opinions, even where the circumstantial evidence bears strongly against the accused. The affirmation of M. Trebuchet, that he has collected the particulars of fourteen cases of suspension, in which the corpse rested on the ground, either with the feet, knees, or even with the nates (and under these circumstances we need not say that the death, if suicidal, must have been most determinedly voluntary), is worthy of the most serious attention, and proves how incorrect may be the opinion of those medical jurists, who have too precipitately concluded that strangulation, if perpetrated otherwise than by hanging, must have been the act of another, and not possibly of the victim himself. The resolute firmness of some suicides is indeed often most remarkable. A woman, mother of a large family, left the room, where her children were playing, into an adjoining one, and there suspended herself from the ceiling. Her eldest daughter happening to enter almost immediately afterwards, saved her by pulling at her garments so forcibly as "rompre le lien." The miserable woman, the cord all this time about her neck, put the child out of the room, secured the door, and succeeded this time in perpetrating the horrid act of self murder.

## DIFFICULTY OF DETERMINING THE CAUSE OF DEATH IN SOME CASES.

It does not belong to our present enquiries to enter upon the physiology of death from strangulation; but the subject naturally leads us to dwell upon those cases of sudden natural death, wherein the corpse of the deceased may exhibit appearances very similarto those induced by strangling.

A fatal attack of apoplexy is an apt illustration of this remark. It is strikingly exemplified by the following details.

The corpse of a man of the name of Courbon was found in a ditch near the village of Dunieres, in the department of the Haute Loire. It was proved that he had visited several cabarets on the preceding evening, and had drank freely at each, so that when he left the last one, he was considerably intoxicated. The ditch in which the body was found, lay near the road which led from the public house to his own home.

Some vague suspicions against three brothers-in-law, who had been in company with the deceased at one of the cabarets, speedily got wind, and became the topic of common talk, and as our author expresses it 'une sorte de bruit populaire, semé par la calomnie et accueilli par une sotte credulité eclata contre eux.' They were arrested, tried and condemned; the leading evidence against them was that of a man, who had occupied a chamber in the inn, immediately adjoining to that in which the three accused were lodging, and who deposed that he had overheard them talking of the crime, which they had just committed. The jury found them guilty of the murder; but admitted that it had not been premeditated, and had been perpetrated under the influence of intoxication. One of the accused, who was believed to have been less concerned than the other two, was condemned to imprisonment for twelve months, and the other two to be branded and sent to the galleys for life. The sentence had been already carried so far into execution, that the prisoners had been sent off to the 'bagne' at Toulon, when some circumstances came to light, which caused the evidence of the forementioned witness to be suspected, and it was now his turn to be arrested, and his testimony re-examined. Distinct proof was brought forward that it was almost impossible that a conversation held in the one room could be heard in the other, and moreover, that this wretched witness had in truth not been in the room at the very time when he had alleged having overheard the talking of the brothers. The case was clearly established, and the punishment which he had caused to be inflicted on two of his fellow beings, was now drawn down upon himself. We need not copy our French brethren's raptures on the "rares talens" of the advocates, the "debut si touchant et solennel," and the admirable heroisme of the prisoners' wives, one of whom, we are told, rivalled in her magnanimity "la femme forte dont parlent les livres saints." The inference in short from the whole affair was, that Courbon, in a state of intoxication had fallen accidentally into a ditch, and there died a natural death. This conclusion was amply confirmed by the report of the dissection; the encephalon presented all the usual signs of an apoplectic seizure. (Our readers will probably agree with us, that the details of the case are little creditable to the sagacity and patient enquiry of French judges and juries.) As illustrative of errors which have been, and therefore may be committed by incautious medical men in their evidence on cases of suspected murder, we shall glance at another case of recent occurrence.

A young man was found dead in his bed-chamber, with three distinct gashes on the front of the neck. The physician who was first called, had stamped in the blood with which the floor was deluged, and had then walked into an adjoining room, passing and repassing several times, and had thus left a number of bloody foot-prints on the floor. No notice was taken at the time of this, but on the following day, when the examination was resumed, the circumstance of the foot prints was particularly attended to, and excited the suspicion that the young man had been murdered. Forthwith a person was arrested, and would, we are told, have "infailliblement subi les rigueurs inevitables d'une instruction criminelle" had not M. Marc, one of the leading physicians in Paris been called in to examine all the particulars of the case. So determined appears to have been the suicidal deed, that, as mentioned above, the deceased had made three distinct deep incisions across the throat. The lowest was about two inches above the sternum, and had divided the trachea, œsophagus, the carotid artery and the jugular veins almost completely across, and had even reached the anterior ligament of the cervical vertebræ; the other two incisions were higher up, but had not penetrated deep enough to wound these important organs.

Many similar cases might be adduced to prove that self-murderers have frequently failed in their dreadful design, at the first and second attempt, and that it has been only by repeated incisions made either in the same, or in different places, that they have at length succeeded.

### MONOMANIA, INDUCING TO MURDER.

Our author, who is by no means remarkable for the "lucidus ordo" of his arrangement, introduces an episode on that form of monomania, in which the mind seems to be overpowered with the horrid propensity to commit murder. This is certainly a subject of the most puzzling difficulty, and deserves the patient examination not only of medical, but of legal jurists. It is only of late years that much attention has been paid to it, and although we may not be inclined to accede to all the speculations of the phrenologists (for it has been most assuredly to them that the merit belongs of first boldly canvassing the subject), no friend of justice and humanity can be willing to refuse a willing ear to the narration of authentic details.

A peasant, 28 years of age, born of healthy parents, had been affected since his boyhood with attacks of epilepsy. Within the last two years, his malady had experienced a melancholy change; for instead of the paroxysm of the convulsive order, this unfortunate man "se trouvait attaqué d'un penchant à commettre un meurtre;" he was so conscious of the approaches of this horrid feeling, for some hours previous to its invasion, that from the moment of its birth, he besought his attendants to confine him, and to remove every weapon of destruction from his reach; his own words were "Lorsqu'il me prend, il faut que je tue, que j'etrangle, ne futce qu'un enfant." "Ma mere, sauvetoi; ou il faut que etouffe." Before the invasion of the fit, he felt as if oppressed with drowsiness, without however being able to sleep, and his limbs were affected with slight convulsive movements; during its domination, he confessed that he was all the time well aware of the atrocity of his wishes; and yet could not master or restrain them. A case in all respects similar to the preceding occurred in the person of a gentleman of good education, and of naturally mild disposition who was recently in one of the "maisons de santé," near Paris; he left several letters in which he had attempted to describe his state of mind before and during the demoniac possessions.

A volume might be filled with analogous examples. Awful indeed and revolting is the subject, but not the less necessary to be studied by the philosopher of human nature. Poets may feign, and romancers may conjure up all the most hideous devices of infernal agents, but alas! the historian of crime, or shall we rather say of insanity, can appal the mind with tales of darker horror. In the annals of 1726, we read that Richard and his wife Bridget Smith murdered their only infant in its cradle, and then hung themselves to the posts of their bed. A letter was found, in which was written—"We believe that God will forgive us—we leave the world, because we are wretched, and without support, and we have murdered our child, to save it from the like misery." (It is unnecessary to allude to the still more frantic tragedy, which within the last few months was perpetrated at Pentonville.)

## DETECTION OF A MURDER, BY EXAMINING THE SKELETON TWELVE YEARS AFTER DEATH.

The annals of last year detail a case, which is one of the most memorable in many respects that is on record. In September 1821, a widow of the name of Houet, disappeared from her residence, and no traces could be discovered at the time of what had become of her. Twelve years afterwards, viz. in April 1833, in consequence of some suspicious circumstances having come to light, the officers of justice, accompanied by M.M. Chevalier, and Boys de Loury, were ordered to repair to the house No. 81, in the Rue de Vaugirard, and to examine all the trenches in the garden belonging to it. After much careful search, some bones were found, and these were at once recognized to be human. The earth was cautiously removed all round, in order that the position of the skeleton might not be disturbed. A quantity of quick lime was found mixed with the soil. When all this was dug away, the position of the different bones was easily perceived; and the opinion which M. Loury formed, was that the corpse must have fallen, or been thrown into the trench head foremost, for all the bones of the lower extremity were at a less depth than those of the cranium and shoulders. All the soft parts of the head had disappeared, except a few fragments of skin, which were recognizable only after having been well washed. The muscles of the chest, of the spine, and on some parts of the hips and thighs had become changed into masses of a black, or greenish brown colour, in which no traces of their original texture could be discovered. In other parts the muscles had assumed a greasy or a soapy character. The ribs were held together by a dry leathery membrane. The abdominal viscera were converted into a homogeneous tarry matter, which lay in the hollow of the pelvis. The brain was shrivelled to a small mass of a waxy consistence, and of a green hue. The tendons and aponeuroses of the shoulder, and some of the other joints were still remaining. Round the os hyoides and cervical vertebræ was found a thick string, or cord, having several turns upon itself. This was a most suspicious circumstance, and naturally suggested the idea of the unfortunate woman having been strangled. Several tufts of hair of a brownish colour, verging to grey were adhering to the cranium—a gold ring also was found in the trench. By sifting the earth, almost every small bone, and even every nail were at length discovered. The men (grave diggers from the Père la Chaise,) who were employed in digging out the earth, gave it as their opinion, that the pit had been made by persons unaccustomed to this description of labour; the walls of it were irregular and sloping inwards, so that the dimensions were much more contracted below than above. The bones having been all carefully cleansed and arranged, the next step in the enquiry was to ascertain, whether they all belonged to the same skeleton; whether the skeleton was that of a male, or of a female; what was the probable age of the deceased, from the appearances of the bones, teeth and hair; how long the body had been in the earth, and so forth. As to the first of these interrogatories, there could be no doubt, that all the bones appertained to one skeleton; almost every individual bone, with the exception of a few of the carpal and phalanges of the fingers were found. The general aspect of the bones, and more especially the configuration of the pelvic bones, abundantly proved that the skeleton was a female one. The appearance of the cranial sutures, the worn-down surfaces of the teeth, the changes of the alveolar processes, the "affaissement" of the anterior parts of the bodies of dorsal vertebræ, the concretion of the cornua of the os hyoides with its body, and the circumstance of some of the hair being grey, or nearly white, all these phenomena indicated that the individual was considerably advanced in life, and probably 65 years old, or thereabouts. The length of the skeleton was determined to be nearly five feet. Such are the data for solving some of the questions, and we come now to the consideration of the inferences to be drawn, from the presence of the cord round the cervical vertebræ. The cord was about a quarter of an inch in thickness; there were six turns or coils "superposés, et affectant une direction presque horizontale; avec une legere obliquité de haut en bas, et d'avant en arriere." The knot or hitch was not found; it had crumbled to pieces. "La position de la corde etablit clairement que la personne a été etranglée sans suspension. Car, dans ce dernier cas, l'obliquité serait de bas en haut, et d'avant en arriere, ou horizontalement, ce qui arrive plus rarement." In reference to the probable period of inhumation, we have to consider not only the appearances of the skeleton itself, but also the nature and condition of the earth, &c. In the present case, the soil was of a sandy texture, and therefore not very favorable to speedy putrefaction, and moreover the corpse had been surrounded with a vault of lime, which by dessicating the softer parts, must have contributed to retard the decay still longer. We may reasonably suppose that the body had been in the earth for a considerable number of years, probably eight or ten.

The following, therefore, are the conclusions which we have deduced from the examination.

1. That the bones belong to a human skeleton.

2. That the skeleton is that of a female.

3. That the woman was probably from 60 to 70 years of age.

4. That her height was nearly, but not quite 5 feet.

5. That her hair, which had probably been fair brown in youth, was at the time of her death white and very short.

6. That her hands were very small.

7. That the bones had experienced no lesion during life.

8. That this woman had died from strangulation, and that this was in all probability the act of others.

9. That the corpse had been buried for several years.

(Signed)
Orfila, Marc & Boys de Loury,

*Annales d'Hygiene.*

### CASE OF POISONING, DETECTED SEVEN YEARS AFTER DEATH.

The body had been interred in ground which was rather elevated, and the soil of which would rapidly absorb any moisture. The coffin, when exposed, was found entire, but very fragile, and so dry, that its inner surface "n'etait pas meme tachetée par l'humidité." The corpse was entire; the head, trunk, muscles, &c. retained their natural position; the thoracic and abdominal viscera were completely disorganized; the only traces of them being a soft brownish matter resting on the sides of the spinal column. It was in this *matter* that M. M. Ozanam and Ide discovered the presence of arsenic by the following processes. The matter was boiled in repeated quantities of distilled water as long as this (the water) was in the least degree discoloured. The different decoctions were then mixed together, and the whole evaporated to a dry extract, which was re-dissolved in boiling distilled water; but as this solution was still of a deep colour, it was again evaporated to dryness, and the residue was deflagrated in a porcelain vessel, with nitrate of potass; the saline mass thus obtained was dissolved in water and treated with nitric acid, and then with a solution of pure potass. The presence of the arsenious acid was most satisfactorily detected by applying the usual well-known tests to different portions of the solution obtained in the above method. —*Orfila, Gazette de Santé.*

### ANECDOTES RESPECTING IMPOTENCE, AFFILIATION, &C.

Having dismissed the division of his subject which refers to "medicine legale judiciaire *criminelle*," M. Trebuchet proceeds to the examination of "medecine legale judiciare *civile*," a no less important theme than the former. It teaches, he says, the duties of medical men, when summoned before the civil courts, and instructs them how to give their testimony and opinions on cases of alleged insanity, whether the enquiry has been instituted for the purpose of depriving an individual of his civil rights and the management of his own property, or for the purpose of setting aside a marriage, will, or other responsible act; it treats also of alleged hermaphrodism, precocious puberty (for this when unequivocally proved may be deemed a sufficient reason for dispensing with the "art. 144 du code civil," which appoints that a male, before he has completed his 18th year, and a female under 15 years of age cannot contract marriage); of alleged, or concealed pregnancy; of alleged, premature, or protracted gestation; of impotency and so forth. Without any regard to the priority of the other subjects, our author flies off at a tangent, on the mere mention of "impuissance," and not satisfied with detailing the modern usages in reference to this calamity, he glances retrospectively at the times, when, the virility or feminility of one of the parties being disputed, "le mariage etait consommé en presence de temoins nommés à cet effet par le tribunal." These interesting exhibitions were known by the name of "congrès." France, Italy, England, and many other countries, had their "congrés" and we are told, "l'Angleterre, surtout, nous en fournit un exemple remarquable dans la procédure qui fut suivie sous le roi, Jacques ler, dans l'instance de divorce que la Comtesse d'Essex intenta contre son mari." The "affaire" of the Marquis de Langey, who, although "jouissant de toute la plenitude de ses facultés physiques," was condemned to pass through the ordeal of the "congrés" was the occasion of the French Parliament abolishing, in 1677, this most strange and indecent proof. From that period the plea of sexual impotence has not been sustained, unless it is "visible et absolue;" and, even under these circumstances, the courts are ever unwilling to sustain the allegation.

With respect to the laws of the French civil code, which refer to the subject of disputed paternity, we observe that, although the article 312 ordains, that "a child born in wedlock, shall be considered to be the offspring of the husband," yet the subsequent sections modify the rigour of this enactment so far, that the husband is permitted to disavow the child, if he can satisfactorily prove that he was, "soit par eloignement, soit par l'effet de quelque accident, dans l'impossibilité physique de cohabiter avec sa femme," from the 300th to the 180th day before the birth of the child, provided always the child is "viable," or capable of living: the "non-viabilité" arising from monstrosity precludes any appeal to the provisions of the article quoted above.

According to the art. 315, the legitimacy of a child born 300 days after the absence or death of the putative father, "pourra etre contestée;" and, again, a child "n'est pas legalement viable, lorsqu'il est né avant le cent quatre-vingtieme jour de sa conception, c'est à dire, avant six mois." As a consequence of the former of these enactments, the 101st art. of the penal code appoints a heavy penalty on an "officier de l'etat civil," who permits the marriage of a woman, once wedded, within ten complete months after the dissolution of the first marriage; for otherwise, she might be pregnant at the very time of her second contract. From marriages, we naturally proceed to the subject of births; and, on this head, it may be worth while to mention, that the 56th art. of the code provides that every infant shall be presented for registration to the civil authorities of the place, within the third day after its birth; and, in default of this, that every person who has assisted at the accouchement shall be subject to imprisonment of from six days to six months, and also to a fine of from 15 to 300 francs.

Doubtless, all our readers are well aware of the gravely disputed questions so long agitated before the Sorbonne, whether a child should be baptized before its delivery, in case of apprehended death, and at what period of fœtal life the young being is to be deemed worthy of this consecration, in the event of its premature expulsion. The following amusing extract is from the treatise, "De Hominibus dubiis, sive de Babtismo Abortivorum," of Paul Zacchias, one of the most distinguished casuists of the 16th century:—"Sub peccati mortalis reatu abortivos omnes, quantumvis minimos, etsi phaseolo vel grano hordeaceo non majores, debent baptisari, quantumcunque breve fuerit tempus a conceptione dilapsum: quamvis etiam vitæ signum per motum non prebeant; dum modo corrupti vel detriti, vel manifeste mortui non dignoscantur."

## ON THE AGENTS WHICH MAY AFFECT THE PUBLIC HEALTH—EPIDEMIC DISEASES.

The third section of medical jurisprudence to which M. Trebuchet leads his readers, comprises what he has designated by the name of "Medecine Legale Administrative," or what is frequently called "hygiene publique." Its aim and object are to watch over and regulate every thing which can influence the salubrity of a place; to observe the varieties of climate, and the influence of these on health; to counteract the effects of all noxious agents, whether on a large or on a small scale; to examine the quality of the various articles of food and drink; to determine the most proper regime for the army, navy,&c.; to suggest the most approved sanitary laws, and to superintend their execution; to report on the state of lunatic asylums, of lazarettos, prisons, cemeteries, &c., and, in short, to examine and ascertain the influence and operation of whatever may affect the general health of communities, or large masses of individuals.

From this imperfect enumeration of the objects of public hygiene, it must appear how extensive and how important this division of legal medicine must be. Our limits permit only a very short allusion to one or two of its themes; and of these we shall select that which has reference to the invasions of epidemic diseases. An example or two will be more instructive than general details.

In 1829, several disorders, having an epidemic character,and occurring without any very obvious exciting cause, were noticed in numerous districts of Paris. As the soldiers quartered in the barracks, in the Rue Mouffetard, suffered most severely, the attention of the medical police was directed, in an especial manner, to the examination of these. All the rooms and wards were found to be in the most admirable order and cleanliness; the food of the soldiers was carefully inspected, and no fault could possibly be found with it; the kitchen utensils, the drains, and, indeed, whatever was considered to have probably any direct or indirect influence on the health of the troops, were submitted to a minute enquiry, and all were declared to be free from any nuisance. At one time, it was supposed that the waters from the fountain at Arcueil were at fault; but then it was remembered that, had this been the case, the surrounding neighbourhood must have suffered as much as the soldiers in the barracks; and the water when analysed, yielded only its well-known ordinary ingredients. "Il faut, donc (says the reporter,) se rejeter sur les causes generales, et notamment sur les variations qu'a subi constamment la temperature depuis quelque tems; sur les transitions rapides du chaud au froid, et du sec à l'humide; sur la fraicheur des nuits qui ont souvent succédé à des journées tres chaudes; enfin sur l'usage de fruits qui n'ont point atteint leur maturité, et dont la vente devrait etre intredite."

The malady in question had many of the characters of cholera morbus; it yielded, however, readily to mild diluents and small doses of opiates. It deserves notice, that the inhabitants in the neighbourhood of the barracks suffered from the same symptoms, but not so severely as the soldiers.

Another report, not less interesting, was made in 1828 on the barracks of Ave Maria, in consequence of a number of the soldiers quartered there having become suddenly affected with tumors and ulcers of the feet,and general feverishness and indisposition, which symptoms were imputed at the time to the unsound quality of the bread used. The affection was a singular one; the soles of the feet became red, hot, painful, and swollen, and exhibited in some instances, "des callosités tres fortes." In a few cases, the palms of the hands were similarly affected; the skin usually exfoliated after the subsidence of the inflammatory symptoms; the patients were obliged to keep the horizontal position, as any attempt to rest on the feet aggravated their distress. The gastro-enteric system was almost always more or less disturbed. This rather anomalous malady puzzled the medical attendants not a little; but of this they were convinced, that "il ne devoit etre attribué ni à des causes locales, ni à la qualité du pain de munition: il faut plutot en rapporter la cause à l'influence de la constitution atmospherique, dont la nature reste inapercue, et qui se ne devoile que par ses effets." The disease was first noticed about the month of June in the preceding year (1827); it speedily made its appearance in numerous parts of the metropolis, and often attacked every member of a family, without, however, exhibiting very distinct contagious properties. The lower orders of society suffered much more than those in comfortable circumstances, and it seemed to affect chiefly "les artisans et les personnes qui, par etat, etaient exposées à des courses fatiguantes, ou obligées de se livrer à des ouvrages manuels, capables d'exercer une forte pression sur le systeme dermoide."

Its duration was very various, in some cases extending to three and four months. All attempts to dissipate it quickly were wholly inefficacious; and even the mere remedial treatment seemed to be but of little avail. By some physicians, this epidemic was supposed to be allied to the pellagra of Italy; the season of the year at which it broke out, the redness of the parts affected during the first stage, the tuberculous tumors which afterwards made their appearance, the desiccation and desquamation of the cuticle, the prevalence of the disease among the lower orders especially, and its obstinate resistance against every remedial measure—all these considerations might well warrant, at least to a certain degree, the nosological speculation alluded to.

### REMOVAL OF PUTREFYING CORPSES WITHOUT DANGER—USE OF THE CHLORURET OF LIME.

In 1830, forty-three bodies of persons killed in the revolution of July, had been incautiously thrown into the vaults of the church St. Eustache. After a few weeks, not only the church, but many of the adjoining tenements, were infected with a most horrible stench. The prefect of the police forthwith appointed a commission, to superintend the exhumation of these bodies: the work was one, not only of considerable difficulty, but of danger at the same time, in consequence of the extreme narrowness of the vaults, and their very imperfect communication with the external air. The members of the commission very wisely resolved to avail themselves of the most potent disinfecting means, and, for this purpose, they employed large quantities of chloruret of lime, both in its dry state and dissolved in water. A huge bucket of the solution was placed on each side of the opening by which the workmen were to descend into the vaults, and others in the body and at the doors of the church. At every stage of their progress, the chloruret was freely used, and so effectual was the precaution, that the stench was scarcely perceptible. Two of the workmen from "La Morgue," and who, therefore, were accustomed to such offensive occupations, being provided with "bridages," descended into the vaults with lighted lamps; the floor and sides of the vaults they first washed with the chloruret, and then MM. Labarraque and Parent de Chatelet followed them, for the purpose of ascertaining the condition of the bodies, and of giving assistance to the workmen, in case they were affected with the putrid effluvia. Much time was spent in clearing away a quantity of earth and rubbish, which had been thrown together in different parts of the vault, and which had partially covered one or two of the bodies; the others had been sprinkled with a thin layer of quick-lime, which had somewhat retarded their disorganization. Several large coarse blankets, well steeped in the chloruret, were stretched out on the floor, and the bodies were then dragged upon them; no sooner was this done, than they were enveloped, and the two open ends secured with strong cords, which firmly bound all fast together: they were then carried to the openings which led to the body of the church, and there again well wetted with the chloruret. During the whole of these most offensive operations, the men repeatedly washed their hands and sprinkled their dresses with the chloruret, while others dashed some against the walls and floor of the vaults. The forty-three bodies were all removed, and conveyed away, without the slightest unpleasant circumstance to any one engaged in the undertaking, which lasted for rather more than three hours. Every thing being completed, "le convois s'est mis en marche à deux heures de la nuit, avec le recueillement respectueux dont l'ame attristé fait une loi, au Cimetiere Montmartre.

## MEDICO-LEGAL CONSULTATION ON A CASE OF SUSPECTED INFANTICIDE.

MM. Orfila, Ollivier, and Boys de Loury were desired by the "Juge d'Instruction," to examine and report upon a communication which Dr. —— had drawn up, relative to a case of suspected infanticide. The questions proposed for their solution were—Was the infant at the full time when born? Was it born capable of living? Was it born alive? and lastly, If born alive, had it perished from accident, from wilful violence, or neglect? The body of the infant had been found in a "fosse d'aisance," where it had lain for 21 days. In reference to the first question proposed, the commissioners state—"that the data furnished by the report of Dr. —— are very imperfect and unsatisfactory: it is mentioned "that there were several patches of hair, an inch and upwards in length, on the scalp—that the nails of the fingers and toes were well formed—that the navel-string was of the length and thickness usual in infants at or near the full time—that the placenta had not been discovered—that the extremities and other parts of the body, which had not been mutilated, appeared to be normal in size and formation, although somewhat enlarged, from the effects of putrefaction, and the consequent cadaveric imbibition." The defects of this report are, that neither the length nor the weight of the body are stated; that the mutilations of the body must have prevented Dr. —— "de reconnaitre le point d'insertion du cordon ombilical" (?); that the length and size of the navel-string are too variable to warrant a very decided opinion that the child was nine rather than only seven or eight months; that Dr. —— has omitted to ascertain, whether the epiphysary cartilage of the os femoris exhibited a nucleus of ossification. The absence or insufficiency of these and other particulars prevents us (the commissioners) from giving a positive answer to the first question, and can only justify the allegation, that it is probable that the infant had reached the seventh month at least, at the period of birth.

2. Was the infant, when born, capable of living (viable)?

To this second question, Dr. M. has replied—"that it is impossible to decide this point, in consequence of the advanced state of putrefaction, and the horrible mutilation of the body; and also because there might possibly have existed some defect, or other error of organization incompatible with life, or some disease essentially and speedily mortal, although neither of these states could be ascertained, for the reasons now mentioned." But certainly there are no data in the report to warrant either of these suppositions. On the contrary, we are bound to believe, in spite of the mangled and putrid state of the head, that the child was not anencephalic; and, indeed, it is expressly stated, that the cerebral substance was converted into a white, curdy, almost fluid pap, and that all the cranial bones could be perfectly well recognised; the description of the heart and lungs shews too, that these organs were quite normal in their development; and no distinct malformation was discovered in any part of the body. We cannot, therefore, admit, with Dr. ——, that the putrefaction and mutilation of the body can be pleaded for the conjecture, "that some congenital lesion or disease, incompatible with life, might have existed, although not discoverable on the examination of the body." We are, therefore, of opinion, that no satisfactory reasons exist for believing that the "enfant ne fut pas viable;" and we may add that, if the report of the appearances found on dissection had been more minute, we might probably have been able to decide more definitively on the question of the viability.

3. Was the child born alive?

This question, which Dr. —— has left unanswered, may be, in some degree at least, elucidated by the following paragraph of the report. "The cavity of the thorax contained no fluid; its viscera exhibited no traces of any lesion; the lungs were ash-coloured on the outer surface, exceedingly small, and lay shrivelled up on the vertebral column; the left lobes, concealed behind the heart, were altogether like the lungs of a still-born infant; nevertheless, they crepitated somewhat on pressure, and, when divided with the scalpel, they presented a surface of a deep port-wine colour; they floated in water, but no inference could be drawn from this lest-mentioned circumstance, as the liver, and even the heart, were almost equally buoyant."

Doubtful, indeed, as the question must be, we are of opinion that the shrivelled, collapsed state of the lungs, and the dark sanguineous colour of their cut surfaces, should lead us to the belief, that the act of respiration had never taken place. The absence of meconium in the rectum, and also in a considerable extent of the colon, does not invalidate this opinion, for the discharge of this intestinal matter may have been induced in several ways; thus, in a hip-presentation, it is not of unfrequent occurrence, that the meconium is voided during the act of labour, especially when this is tedious, and the child is detained long in the pelvis. Perhaps even the compression of the body of the child, during the repeated attempts to drag it out from the pipe of the "fossé d'aisance," may have contributed to the same effect. It may be added, that the total absence of the usual green colour in the contents of the upper portion of the large, and in the small intestines, is a circumstance which may induce us to suspect that the infant was not at the full term when born, and which may, therefore, be mentioned as confirming the supposition, that it was not born alive.

4. If the child was born alive, what was the cause of death?

The answer to the former question has anticipated our reply to this one. The mere fact of the child's body exhibiting numerous injuries and mutilations cannot be fairly adduced, as proving that its death had been occasioned by violence; for it is not impossible that these injuries and mutilations were inflicted during the attempts to extract the body from the pipe of the privy. Nevertheless, it would have been most desirable that the description of these injuries had been much more exact and minute than has been given in the report, as it is possible that it might thus have been determined whether they had occurred before or after death.—*Archives Generales.*

---

### POISONING WITH BELLADONNA.

During the choleraphobia which prevailed so generally over France in 1832, various nostrums were recommended and used as preservatives against the mysterious foe. Among these was an infusion of the leaves of the menyanthes trifoliata, or common buckbean of the fields. One morning, in the month of July, Dr. Claubry was summoned to the relief of an elderly man, who, it was supposed, had been seized with an apoplectic fit. On entering the apartment where the patient lay, he was much struck with the peculiar physiognomy of the younger daughter of the family; her look was dull, vague, and unsteady, almost like that of a person labouring under amaurotic blindness, and her features were affected with a curious unmeaning smile, which was evidently involuntary: the voice sounded as if it were masked, the gait was unsteady, and the girl could not stand erect without laying hold of some support.

Dr. C. made no enquiries at the time, but proceeded to examine the state of the father, who was lying in bed:—His face was of a purple hue; the conjunctivæ injected with a blueish-coloured blood; the pupils dilated and immovable; the lips and tongue parched; the man complained of intolerable thirst, and of a distressing feeling of constriction in the throat; his speech was embarrassed, and scarcely intelligible; the skin was warm, the pulse full, and rather slow. The two daughters reported that they had called their father that morning at 8 o'clock, but that they found him sleeping unusually heavily; that, when they awoke him, he seemed to be confused and scarcely canscious; that his voice was thick and interrupted, and that, when he attempted to rise, he became giddy, and complained of every thing going round with him. The correctness of these details was confirmed by Dr. C.'s own examination, and he was now struck with the resemblance in the expression of the younger daughter to that of the father, although in a much less degree. He immediately suspected that they were both suffering from the effects of intoxication; and his suspicions became stronger, when he took notice of the elder daughter, who was similarly affected with a general stupidity and confusion. "La station difficile; demarche incertaine, air d'etonnement, d'hebetude, œil inanimé, parole entrecoupée, secheresse de la langue, de la bouche, des levres," &c.; and if we add to these, an unusual loquacity, a sort of foolish unmeaning smile, my readers will not be surprised, says Dr. C. that I at once exclaimed "Dieu me pardonne, vous avez tous les trois une pointe de vin!" But the doctor was soon satisfied of his error; and on making further enquiries, he found that they had all drunk several cups of the supposed buckbean tea, on the preceding evening, before going to bed. The remainder of the dried herb was now examined, and Dr. B. at once recognised that it was certainly not the memyanthes; the packet had been bought at a "petite boutique assez mal tenue d'herboristerie." Without, however, losing time, to ascertain what plant it was, Dr. B. ordered all three to drink very copiously of lemonade, to have mustard poultices applied to the extremities, and to be kept awake, and if possible, moving about the room. Fortunately these means were sufficient, and in the evening, the symptoms of oppression had greatly decreased in every one. It may be worthy of notice, that no cutaneous redness was observable in any of these patients, although all of them complained of considerable tingling and sense of pricking over the surface of the body.

In two cases lately reported by M. Laurand, a distinct "eruption scarlatiniforme" was perceptible, and more especially on the body and thighs. The following is a brief detail of the particulars.

Some pills containing a minute quantity of the extract of belladonna had been ordered for two young children, who were suffering from hooping-cough. The chemist had mistaken, we are told, the words "grains" for "gros" (!) and a poisonous dose of this most active drug had therefore been inadvertently administered. For several hours the children were exceedingly drowsy, and slept very heavily. On awakening, they were observed to squint, and to talk confusedly of all sorts of foolish things, calling out that they saw rats and mice running about the floor, butterflies on the walls, beautiful birds flying about, candles burning, stars sparkling, and so forth.

The loquacity of the children, both of whom were naturally of a dull taciturn disposition, was very remarkable. This "espece de delire jovial" continued for three or four hours, and was again succeeded by a tendency to drowsiness. By the use of accidulated drinks and the application of sinapisms to the stomach and extremities, all the unpleasant symptoms subsided, and on the following day, the children had quite recovered from the effects of the poisoning. The hooping-cough, however, "reparut de la meme intensité." From the preceding observations, we may infer, that the action of belladonna, in doses not so poisonous as to prove fatal, is to produce, first a stupefying effect, and then an "exaltation de toutes les facultiés."—*Journal Hebdomadaire.*

---

## LACERATION OF THE DIAPHRAGM—MEDICO-LEGAL ENQUIRY.

In last September No. of the Archives Generales de Medicine, an interesting case of this most alarming accident is recorded, and some valuable remarks are appended to the report by the narrator, with the view of showing that although almost necessarily fatal, it may not be immediately so, and that the patient may survive for several hours. Three men returning half drunk from a fair, met a labourer on the road, whom they began to insult, but whom they soon found was more than a match for them all. After they had received a good drubbing, they made the best of their way to Dr. Davat's house, a distance of rather more than half a league from the scene of the scuffle; they took a full hour to reach it. Two of the men were found to have received only some trifling bruises; but the third one, more advanced in years, and who had sat down when he entered the room, resting his head on his hands, and his elbows on his knees, seemed to have been much more severely injured; his features indicated inward distress, but not certainly of a very alarming character. After he had rested a few minutes he rose, walked slowly, but without tottering, to the door. Hitherto he had had no vomiting, nor had he uttered a syllable or even a moan, but had remained all the time in the attitude we have just mentioned. When they left Dr. D.'s house, they had an hour's walk before they could reach their own homes; at this time it was about six o'clock P.M. Several people joined them on the road; but the elder of the three continued in the same taciturn absorbed state; he would not speak, and answered questions only by "yes" and "no." Still he made no complaint of any severe pain or suffering. Their progress must have been very slow, for we find that at nine o'clock they had gone only half their journey; and then J. V. (the eldest) found himself unable to proceed any farther; exhausted, he lay down in an outhouse, and soon becoming insensible, he remained there till the following morning, when he was carried home. Dr. D. found him lying on his back, in a completely comatose state. No external traces of any severe injury could be discovered any where; "le ventre, souple, n'avait rien de particulier." It was therefore conjectured that the encephalon had sustained some injury; probably that some vessel had given way, and that effusion had taken place to a limited extent. A vein in the arm was opened, but no blood could be obtained—he died at 1 P.M. The dissection was performed by the authority of the civil magistrate, in consequence of the report that the patient had died from the bruises he had sustained in the scuffle. On dividing the scalp, a quantity of black blood was found effused into the cellular tissue between the occipito-frontalis and the bone, and also in the interstices between the muscles on the back of the neck. Over the middle of the left parietal bone, there was a limited extravasation, resting on the bone itself; the sub-pericranial cellular tissue was somewhat detached: on clearing the blood away, a double fracture was found; one running longitudinally, the other transversely, and both meeting at the "bosse" of the parietal bone; from this point a small fissure communicated inwardly with the cavity of the cranium, and it had been along this channel that the blood extravasated under the pericranium had made its escape. On elevating the bone, an effusion to the amount of nearly two ounces was discovered on the surface of the dura mater, which was detached from the bone, for at least five inches in extent. When the thorax and abdomen were opened, a very remarkable lesion was found. A lacerated opening through the centre of the diaphragm had given passage to the large cul-de-sac of the stomach into the cavity of the chest; the rent was two inches and a half long, and had certainly been of very recent occurrence, as the edges were still tinged with blood; the extruded portion of the stomach also was ruptured, and the contents of the viscus, consisting of half digested meat, vegetables, bread and wine, and some clots of blood, were found effused into the thorax.

*Remarks.*—It was necessary for the medical men who had attended this patient, and had examined the corpse, to report an official account of their enquiries, and to declare their opinions as to the probable cause of death. With regard to the injury of the head, the following very obscure and puzzling decision is given. "Dans quelque position que se trouve le corps, une pareille chute sur le parietal est impossible. La violence qui a fracturé, le crane n'a donc pu etre que l'effet secondaire d'une premiere cause qui a mu cette violence en sens inverse de l'attraction!"

The other important injury, that of the diaphragm, may give rise to much greater discrepancy of opinion, as to the cause which produced it, and the exact time at which it happened. It has been a very general, and we must add, a very natural belief that such an injury as this, and especially when it is complicated with another, perhaps still more mortal accident, we mean that of rupture of the stomach and the consequent extravasation of its contents, has always been very speedily fatal. Let us analyse the particulars (as far as they can be gathered from the perhaps garbled reports of the surviving companions) of the present case, before we decide.

It is alleged that the man had been severely beaten; that he was stunned in consequence of the blows received, but that he was not at any time quite insensible or comatose; that on recovery from the stunning, he walked the distance of half a league, slowly indeed, but sometimes without any support, or assistance, and that he scarcely spoke a word, the only answer which he ever gave to enquiries, being by a simple "yes," or "no;" that when he entered the room of Dr. D. he sat down, and remained in a bent or folded position all the time he was there; that he made no urgent complaint, but seemed stupid from the effects of intoxication; that his breathing did not appear to be particularly distressed; that he arose from the chair by his own efforts, and that his walking as far as the mill, where he lay down, was "lente, grave, mais non mal assurée." During all this time, he had never been completely insensible, nor had he ever vomited, although he had made several attempts to do so. Now all this history is quite intelligible, had there been no other accident, except that of the cranium; for we might suppose that the effusion of blood had been slow and gradual, and the natural effect of this must have been to have caused a lethargic stupor, which blunted the pain and distress, which otherwise must have been experienced; but we can scarcely admit that the lesion of the diaphragm could have taken place at the same time, and that so serious an accident could have been compatible with the prolongation of life, for so many hours, as occurred in the present case. Some light may be thrown on this subject, by examining the records of similar instances. Baron Percy is one of the best authorities on this subject, and some important observations have been published by him in the art. Diaphragme, in the Dict. des Sc. Med. and also in M. Cavalier's Inaugural Dissertation. We shall extract a few of the cases detailed in these memoirs.

A carpenter fell from the dome of the Invalids upon some scaffolding. He gradually recovered from the effects of this accident, but ever afterwards was troubled with a frequent cough, dyspnœa, and a pungent pain on the left side of the chest. Six months afterwards, he was so unfortunate as to fall from a height of twenty feet on the ground, and he broke seven of his ribs. He lived only for four days.

On dissection, there was found an opening, two inches and a half in extent through the aponeurotic centre of the diaphragm; the edges of this opening were cicatrized; a portion of the stomach and also of the colon had become protruded into the cavity of the thorax; the heart was pushed to the right side, and the left lung was much shrivelled in size, and pushed up to the top of the chest.

A young woman was suddenly affrighted when the pains of labour were on her. She uttered a scream, spoke a few stifled words, and expired. The diaphragm was found ruptured in its left side, and a large portion of the stomach, epiploon, and colon had escaped through the opening into the cavity of the thorax.

In the other three cases related by the Baron, death took place almost instantaneously; in all of them, the accident seemed to have been occasioned by violent efforts of vomiting.

A strong athletic man had gone down into a vault, for the purpose of assisting to lower a coffin into its place; he was standing underneath it, while other two men were easing it down from above. Afraid that it would fall upon him, he was trying to stop its too rapid descent, but at that moment he dropped down insensible, and after a few groans he expired. A considerable laceration through the substance of the diaphragm was found on dissection.

It will be remarked, that in all these cases, except in the first, the death of the patient was almost immediate, and in all, the symptoms of some mortal injury were strongly enough marked during the short interval of life; the pain, the inward agony, the ghastly faintness, and the dreadful oppression of breathing were invariably more or less present. How different then from the history of the case, now under consideration! The conclusion, therefore, which we feel ourselves bound to deduce is ' que J. V. pouvait, peutetre tout au plus, avoir le crane fracturé lorsqu'il s'est presenté chez M. Davat, mais qu'il ne portait pas l'ensemble des blessures qui ont été decrites."

[When we had drawn out all the details of the present case, we chanced to light upon a paper in a recent number of the Journal Hebdomadaire, in which reference is made to one somewhat analogous, in which the patient lived for six days after the accident. It is recorded in the Journal General de Medicine for 1819. A healthy and vigorous man, 59 years of age, was attempting to mount to his seat on the top of a coach: he had one of his feet on the front wheel, the other resting on the ground; and just in the act of lifting himself up, he pulled the coach, (which must have been very light) over and fell back, underneath it. He was taken to the Hôtel Dieu on the third day after the accident; the right thigh was found to be fractured; but no alarming constitutional symptom was present; the pulse was natural, the respiration not oppressed; and the only annoyance was a teasing cough, accompanied with a copious expectoration. He unexpectedly sunk on the sixth day, " apres une agonie courte et peu douloureuse." The dissection quite surprised all the medical men; for no sooner was the sternum lifted up, than a portion of the intestines escaped from the thorax; the left lung was squeezed up to the top of the thorax; the diaphragm had been detached from its adhesion to the sternum and ribs for a considerable extent, and through this large gap the bowels had been protruded; there was also another smaller rupture of the diaphragm, beginning at its point of attachment to the last true rib of the left side, and extending to the corresponding crus of the muscle.—REV.]

In what manner, and from what mode of injury, the accident was produced, is quite impossible to determine. No satisfactory information could be derived from the testimony of the man's companions, and we have only the negative evidence of the absence of all external bruises of the skin, and of any mud, or impression of other substances on the clothes of the chest and belly. " La rupture," says M. D. " du diaphragme, et de l'estomac ne peut elle meme s'expliquer que par l'action d'une violence exterieure qui s'est exercée en repoussant la masse intestinale de bas en haut. Le corps qui a agi a dû luimeme etre recouvert de substances souples; il a dû agir tres promptement avec une violence extraordinaire, et d'un seul coup, car les parois abdominales ne presentent aucune lesion. Quel corps reunit mieux ces conditions que le genou?"

With the view of throwing as much light as possible on this obscure subject, M. Davat performed a good many experiments on dead bodies for the purpose of ascertaining whether the stomach when distended with food, the œsophagus being tied, may be ruptured after death, by a heavy blow on the abdomen. He found that a single blow was very rarely sufficient; for only once, in six subjects, did it succeed, and in this case the stomach was literally filled to cramming: but a repetition of blows was always effectual, provided the viscus was not empty; sometimes it was ruptured in two places at the same time. In none of these experiments was the diaphragm ever found injured; probably from the circumstance of the lungs being uninflated, and there being therefore room above for the diaphragm to be pushed upwards. During life, on the other hand, this moveable curtain is pressed upon, on both its sides, by the distended thoracic and abdominal viscera; and if we wish to perform experiments on the dead subject, which can have any analogy with accidents occurring to the living, it is necessary that the circumstances of the latter state be imitated as nearly as it is possible. With this view M. D. distended the intestines and stomach with air, and secured the œsophagus and colon with ligatures; he next inflated the lungs and tied the trachea; and having given several severe blows on the epigastrium, he found, on opening the body, that not only the stomach, but the diaphragm also was ruptured, without however any protrusion of the abdominal viscera through the aperture. Not satisfied with this result, he made some trials on living animals, and the evidences of these agreed so far with the results which he had already obtained, as to convince him that the lesion produced depended in a great measure on the condition of the respiratory organs at the moment of the infliction of the blow. If expiration has taken place, the stomach only was usually ruptured; but if the lungs were inflated, the diaphragm also was sometimes ruptured, and the stomach found protruded through the opening into the thoracic cavity. Such experiments as these are infinitely more satisfactory (although we cannot but condemn such gratuitous cruelty) than any performed on dead bodies; but we must confess that we are somewhat puzzled to account for the double rupture in one of the trials on the dead body. If quite correctly stated, it must have been caused by the violence of the blow, and by this alone; but until we have further data, we shall continue to hold the opinion, that rupture of the stomach is the effect of a vital, rather than of a mere mechanical action. It is much more reasonable to attribute such a lesion, when it is found after a sudden death, to a spontaneous laceration from a tetanic spasm (a cause which we know is quite sufficient to induce rupture of a muscle) than to the mere agency of a direct blow however violent. There was recently a case in the Cochin Hospital, of rupture of the diaphragm, in consequence of a blow with the fist on the left side of the thorax. It is not surely probable that the mere mechanical force of the blow was the immediate cause of the rupture. In concluding the report of the preceding most interesting case, it may be worthy of mention, that the court, before which it was examined and tried, "faisait porter tout le poids de l'accusation sur l'homme qui a battu J. V. à la foire; mais qu'admettant des circonstances attenuantes la peine a eté reduite à sept ans de travaux forcés."—*Archives Generales*, *Sept.* 1834.

---

## APPEAL OF THE PRINCIPAL SURGEONS IN PARIS AGAINST THE VIOLATION OF HOSPITAL APPOINTMENTS BY CONCOURS.

The following petition addressed lately by the members of the central bureau of hospitals, to the Minister of the Interior respecting a recent official appointment, is worthy of being recorded, as a proof of the resolutely honorable feelings which pervade the medical profession in France.

M. LE MINISTRE.—The office of SURGEON to the Maison Royale of Health in the Faubourg St. Denis, has become vacant, by the resignation of M. Jules Cloquet. One of the physicians of that establishment has applied to the Council-General of Hospitals, for permission to change his title of Physician to that of Surgeon, and to be appointed to the vacant office.

Such a change being unprecedented, and contrary to the fundamental provisions of the law, the Council-General has resolved to refer the question to the Minister of the Interior. The undersigned surgeons of hospitals, and of the Central Bureau, deem it their duty, as being interested in the welfare of the public, and in the maintenance of individual rights, to address to you the following observations.

When the office of surgeon to any of the hospitals becomes vacant, there are only two legitimate modes of filling up the vacancy; either by directly naming a surgeon, or by imposing the duties of the vacant office on a surgeon of another establishment.

The 24th* Article of the Code, regulates the nominations in the one case, and the 5th† Article determines the limits, within which, in the other case, the changes can properly be made.

The appeal of the Council-General is manifestly in opposition to the enactments of these two articles, and this violation, if permitted, will introduce confusion into the medical arrangements of the hospitals.

It will encourage others to use the same subterfuge, in attempting to obtain the office of surgeon, without undergoing the ordeal of the Concours, an ordeal which has been always recognized, as affording the only sufficient guarantee for the qualifications of candidates.

It will have the effect of withdrawing surgical appointments from the surveillance of the Minister of the Interior, and vesting them entirely in the Council-General.

It will deprive those surgeons who are at present surgeons of other hospitals, of their right of change, a right which they may have acquired by the length and value of their services.

It will also unfairly stop the career of the surgeons of the Central Bureau, who have acquired, by their examinations at the Concours, and by their services in the hospitals, the right of being elected to vacant offices.

Relying upon the justice of their reclamation, the undersigned surgeons of hospitals and of the Central Bureau, petition you, M. le Ministre, to order the Council-General to act strictly according to the existing laws.

Monod, Robert, Michon, Guersent, Vidal, Danyau, Surgeons of the Central Bureau.

Appended to the foregoing petition are a number of certificates or declarations from the leading surgeons in Paris. We shall select a few, and give them in their original.

"La violation de la loi du concours, loi si sagement ètablie par le conseil-general des hôpitaux, serait un coup funeste porté a la medecine et a la chirurgie des hôpitaux, et par conséquent aux malades qui viennent s'y faire traiter; elle indiquerait à tous ceux qui voudraient y être admis comme médecins ou comme chirurgiens, qu'ils ont moins besoin de savoir que d'intrigues.

DUPUYTREN.

"La reclamàtion de MM. les chirurgiens du Bureau central me semble tout á fait fondée sur le respect qui est dû aux droits qu'ils ont acquis. La mesure projetée, et contre laquelle ils s'élèvent avec raison, me parait contraire à l'équité, et peut-être tout à la fois nuisible aux intérêts de l'enseignement et à ceux des malades.

PAUL DUBOIS,
*Professeur à la Faculté de médecine.*

"La réclamation adressée â M. le ministre de l'intérieur par MM. les chirurgiens du Bureau central est fondée sur la raison et sur le texte des reglemens actuellement en vigueur. Il serait désespérant pour l'avenir que le conseil-général des hôpitaux transgressât une loi que lui-même il s'est imposée. Je prends donc la respectueuse liberté de recommander à M. le ministre la demande qui lui est adressée.

Paris, 6 decembre 1834. ROUX.

"La présente réclamation est fondée sur la raison et l'équitê, ainsi que sur les réglemens d'apres lesquels, jusqu'à ce jour, on a fait les nominations dans les hôpitaux civils de Paris. Si elle n'était pas écoutée favorablement par l'autorité supérieure, ce serait un précédent déplorable. On ouvrirait ainsi une porte á l'intrigue, à l'ignorance; on paralyserait le zéle et l'emulation des jeunes chirurgiens, et l'on verrait bientôt la direction de nos hôpitaux confiée à la médiocrité, et tout enseignement détruit dans ces asiles de consolation pour les malades et d'instruction pratique pour les élèves.

---

* The physicians and surgeons of hospitals and of hospices (institutions for the aged, destitute and incurable) shall be appointed by the Minister of the Interior, on the recommendation (avis) of the Prefect of the Seine, from a list of three candidates, selected by the Council-General.

† The physicians, surgeons, and apothecaries of hospitals and hospices, may upon application, and with the permission of the Council-General, be transferred "en la meme qualité," from one establishment to another.

BRESCHET,
*Chirurgien ordinaire de l' Hôtel Dieu.*"

"Je partage absolument l'opinion exprimée par mes honorables collègues, et ne crains pas d'ajouter que ce serâit un antécédent des plus dangereux et des plus injustes à la fois que de permettre la mutation contre laquelle ils s'élèvent.

VELPEAU."

"La demande adressée à M. le Ministre me semble de nature à devoir être approuvée par tous les amis de la justice. Je crois, en mon particulier, que la mesure contre laquelle elle est dirigée serait attentatoire, de la manière la plus manifeste, aux droits acquis de MM. les chirurgiens du Bureau central.

BLANDIN,
*Chirurgien de l'hôpital Beaujon.*"

"Je partage entièrement l'opinion de mes collègues sur la demande de nos jeunes confrères du Bureau central. Ils réclament un droit acquis par le concours et par le règlement des hôpitaux. Qu'on y prenne garde; on établirait un précédent funeste qui livrerait les pauvres malades à l'ignorance et à la médiocrité.

LISFRANC,
*Chirurgien en chef de la Pitié.*"

"La réclamation de MM. les chirurgiens du Bureau central me parait parfaitement fondée, et je me joins avec empressement à mes confrères pour prier M. le ministre de l'interieur d'y faire justice.

Baron RICHERAND."

## SOUVENIRS DU CHOLERA.

Such is the heading of one of the themes, in a series of satirical poems on medical subjects, entitled "Nemesis Medicale, ou Recuil de Satires, par un Phocéen," which has been recently published in Paris. Some of these squibs in rhyme are sufficiently amusing, and evince considerable talent for droll and piquant detail. The Ecole, Acadamie, le doyen de la Faculté, Conseil Royal de l'Université, the hospitals, professors, &c. all have the whip applied to them in their turns, now with a mere good-natured fillip, and now with the biting lash of severity. The author promises, in the outset, that he will keep "sa verve" within the bounds of decency and fairness.

"Quelque soit le champ clos ou notre ardeur se joue,
Jamais nous ne prendrons nos rimes dans la boue."

As the exordium to the "Souvenirs du Cholera" evinces "noblesse de pensée, pureté d'expression, et richesse de la rime," we subjoin it, for the benefit of the more prosaic "medecins" on this foggy side of the Channel.

"A quel temps de douleur vais-je, helas, m'inspirer?
Du dueil universel je me sens penetrer;
Et sensible à ma voix, emue à mes alarmes,
Nemesis, elle-meme a repandu des larmes.
Comment ne pas pleurer dans nos murs consternés,
Sur vingt mille habitans en vingt jours moissonnés;
Sur ces tristes debris d'immenses hecatombes,
Sus ces monceaux de morts dont regorgent nos tombes?
Medecins, dans mon cœur saisi d'un saint respect,
Mon sang vivifié tressaille à votre aspect;
Vous pour qui le public s'est fait une habitude
Du dedain, de l'injure, et de l'ingratitude.
Nuit et jour au chevet d'un malade expirant,
Humant du cholera le souffle devorant,
On vous vit defier sa menacante approche,
Bayards incuirassés, sans peur, et sans reproche;
Par votre devouement et votre autorité,
Vous avez rassuré le peuple epouvanté.

Prompts à jeter vos corps en gage de bataille,
Vous n'aviez pas alors l'espoir d'une medaille."

We hope that "le sang vivifié" of our readers may "tressaillir" when they peruse these laudatory strains.

In his endeavour to clothe the technical description of this modern plague with the graces of verse, our author has displayed "un tour de force," which is sometimes really very happy; for example—

"Vous cherchez vainement dans ce poignet perclus,
Une artere qui fuit, un pouls qui ne bat plus.
Tout en lui, tout est froid; chez ce mort qui respire
La chaleur bienfaisante a perdu son empire;
Et quand il fait revivre un corps ainsi formé,
Dieu d'un souffle nouveau doit l'avoir animé."

## ON THE RESPONSIBILITY OF MEDICAL MEN IN FRANCE.

At Rome, the Lex Aquilia decided that medical men were responsible for errors committed in the pursuit of their professional duties, whether these errors proceeded from ignorance or from inattention. No one had any right to complain of this enactment in those early times, seeing that there was an authoritative codex, containing a certain number of prescriptions, from which physicians and surgeons were ordered not to deviate. This prohibitory code was, as a matter of course, repeatedly neglected, and it gradually fell into desuetude. The earliest records of medicine in France prove that a lex Aquilia was recognized in that country. We have the account of the trial of a surgeon, in April, 1427, for having administered "un remede violent, qui pouvait le tuer ou le guerir en peu d'heures." In the records of the French Parliament for 1696, we find, however, "que les chirurgiens ne sont pas garans et responsables de leurs remedes, tant qu'il n'y a que de l'ignorance, ou de l'imperitie de leur part, quia ægrotus debet sibi imputare cur talem elegerit." In 1716, a surgeon was amerced in 15000 liv., to be paid to a young man whose arm required amputation, in consequence of a maltreated fracture, and he was forbad to practice surgery in future. In 1725, a surgeon of long standing, and of acknowledged skill, was so unfortunate as "estropier un malade en lui faisant une incision." No charge of negligence or incapacity could be laid against him, but "he had operated without the sanction of two other surgeons, who had been called into consultation with him."

The defence rested on the inapplicability of the expression, "si male et imperite," to the accused; and it was fairly urged, that many diseases and accidents terminate unfavourably, in consequence of the unhealthy constitutions of the patients, and of other accessory circumstances, such as the state of the weather, mental emotions, &c. The court nevertheless found the surgeon liable; but, in consideration of his long-tried ability, and of his good intention, "a bien voulu ne pas donner un jugement rigoureux—elle vous enjoint d'appeler à l'avenir un conseil dans les grandes cures, et soit que vous soyez l'ancien, ou le plus jeune, de déferer à l'avis de la majeure partie dans la consultation qui sera faite." The responsibility of medical men is to this day, in France, not founded on any appropriate and definite law, but on certain articles of the code, which are of a very vague comprehensiveness, such as the following:—"Quiconque, par maladresse, imprudence, inattention, negligence, ou inobservation des reglemens, aura commis involontairement un homicide, ou en aura eté involontairement la cause, sera puni de trois mois à deux ans, et d'une amende de 50 francs à 600 fr.;" and "chacun est responsable du dommage qu'il a causé, non seulement par son fait, mais encore par sa negligence, ou par son imprudence." Of late years, not a few trials have been instituted against medical practitioners for imputed mala praxis, and heavy damages have been awarded in several instances. In 1825, Dr. Helic was called to the assistance of Mad. Foucault in labour: the labour was long and very tedious, and Dr. H. supposing that the child was impacted in the pelvis, cut off both arms, which protruded; the child unfortunately survived the delivery. The father prosecuted the Doctor; the Doctor in vain urged that a "Docteur en Médecine et en Chirurgie" was not responsible for "ses faits du partique." The Court laid the case before the Royal Academy of Medicine, a committee of which examined all the statements most minutely, and reported "que l'accoucheur avait commis une faute, mais qu'il n'appertenait pas à l'Academie de prononcer s'il devait en etre responsable." When this report was made to the Academy, objections were raised against it on several grounds, and ultimately the following declaration was agreed to;—"la manœuvre inculpée compte pour elle un assez grand nombre d'autorités imposantes, pour qu'elle ne puisse pas etre attribuée à l'erreur." Somehow or other, another commission was appointed, and the judgment which the members pronounced was, "que l'Academie ne trouvait, dans les pieces de la procedure, aucun element suffisamment clair pour repondre aux questions du tribunal." But the learned jury of Domfront were not to be baulked in this way; they did not hesitate to say that the questions had been "eludées plutot que resolues" by the Academy, and forthwith they condemned "la pauvre Docteur" to pay to the child an annuity of 100 francs for the first ten years of its life, and afterwards one of 200 francs during the remainder of its life; all the expences of the action were also saddled upon Dr. H. This case excited the greatest interest among medical men in France, and gave rise to numerous and very acrid disputations. As connected with obstetrical jurisprudence, it may be worthy of notice that, by the article 33, "midwives are forbidden to employ instruments, in cases of difficult labour, without the concurrence of a recognized medical man.

Three years ago, Mad. Durand was treated by "le Sieur Charpentier, officer de santé," for a supposed fracture of the carpal ends of the anti-brachial bones. Under this impression, he applied splints and bandages; the limb began to swell, became inflamed, and ultimately gangrenous: the eschars, indeed, separated, and the sores healed; but the hand was permanently bent upon the forearm, and the member was left utterly useless to the patient. The consequence of this misfortune was, that the patient was reduced to beggary. After a lapse of three years, Charpentier was prosecuted, and amerced to the amount of 4000 fr., "comme coupable de blessures graves, commises par imperitie ou par imprudence." [The error committed by M. C. in this case is of very frequent occurrence; we recommend our readers to consult a paper at page 216 of our last No. where they will find several instances detailed illustrative of this remark.—REV.]

An appeal was made from this judgment, and Dr. Olivier was appointed to examine the woman's hand, and report his opinion upon the case: he "declara qu'une luxation du radius etait un de ces accidens graves qui necessitent, de la part d'un officier de santé, l'appel d'un medecin comme conseil, et que l'estropiement de la femme Durand provenait moins de cette luxation, que de la constriction par les bandages." [A proof of the strange and anomalous state of the medical profession in France. To make it truly respectable, all, the officier de santé, as well as the médecin or docteur, must be equally educated, and all equally responsible.—REV.]

The "affaire de M. Thouret Noroy," who was lately amerced in a heavy fine, for imputed mala praxis, deserves a short notice. M. N. was so unfortunate as to wound the brachial artery during venæsection: an aneurismal varix formed; the patient applied to another surgeon, who, most unhandsomely and most unprofessionally, performed the operation of tying the artery without acquainting M. N. of it. The operation was unsuccessful; and a gangrenous inflammation having appeared in the fore-arm, amputation of the limb was necessary: the unworthy M. Chouippe was again the operator.

On recovering from these complicated

distresses, the patient sued M. Noroy for damages. The tribunal of Evreux awarded 600 francs, and also an annuity of 150 fr. to the prosecutor. M. N. appealed from this decision to the "Cour Royale" at Rouen; but, instead of obtaining what he considered a just redress of his wrongs, the fine was raised from 600 to 1000 francs.

He has now addressed himself to the Royal Academy of Medicine at Paris; but this liberal corps has, with courtier cunning, taken no notice of the appeal.

In consequence of this cruel treatment, a large meeting of the "Association des Medecins de Paris" was recently held, to determine what steps should be taken in favour of M. Noroy. The substantial relief of pecuniary subscription was not neglected; and M. Dubois, the Honorary Dean of the Medical Faculty, commenced the list by a noble donation of 500 francs.—*Jurisprudence de la Medicine.*

## Fees of Medical Men—a legal Claim in France.

Although the legality of the claims of a medical practitioner is recognised, there is much uncertainty, and frequently not a little disputation, as to the extent to which this legality may be urged. The art. 2101 and 2272 of the civil code are the only ones which refer to this subject, and they do so only imperfectly: "Le premier, en declarant privilegés les frais quelconques de derniere maladie, concurremment avec ceux auxquels ils sont dues, et le second, en prescrivant par un an l'action des medecins, chirurgiens et apothicaires pour leurs visites, operations, et medicamens." It will be observed that according to the former of these articles, the claim is classed along with the other expenses of the "derniere maladie;" no reference is made to other illnesses, nor does it satisfy the question whether the medical practitioner be entitled to rank before, and in preference to, the other creditors, in the event of a failure. "Les tribunaux," we are told, "ne paroissent point admettre cette interpretation, (granting to medical men any peculiar "priviligium" over the other creditors); ils se fondent sur ce qu'il est question de ce privilege immediatement apres les frais funeraires, et ils ne concluent qui'l n'existe que *lorsqu'il y a mort du malade.*"

The conclusion therefore must be that "les creances des medicins ne sont *privilegiées* qu'autant qu'elles s'appliquent à la derniere maladie. Les honoraires qui seraient dus pour des maladies anterieures ne seraient l'objet d'aucun *privilege.*" The term of twelve months is allowed to make the claim; when the period, elapsed since the attendance, has exceeded that time, the claim for any remuneration has often been disputed. We shall now very briefly allude to the amount of charges which the French law awards to a medical practitioner. Our author says, "En reconnaissant aux medecins le droit de reclamer leurs honoraires en justice, la loi veut que ces honoraires soient proportionnés à l'importance du traitement, et surtout à l'etat de fortune du malade, ou de ses heritiers." In a late trial, a Dr. B. made the following claim against one of his patients, Mad. L. "Deux ans, deux mois, douze jours, à trois visites par jour, font 2046 visites, à deux francs, 4812 francs."

In addition to this charge, there were some others, for having applied at different times blisters, cauteries, dressings, &c.; for operations on the toes, for venæsections, for consultations, for sleeping all night in the patient's house, and "enfin pour cent cinquante vacations à l'immersion des bains de la malade;" not to mention many other acts of professional kindness, "afin," says the considerate doctor in his letter of claims, "de ne point leser la part de mon affection." The patient had offered to pay 2400 fr. The Court, after hearing the evidence on both sides, deemed this sum insufficient, and "condamna M. L. a payer 4200 fr. sous la reduction de 750 fr. pour la montre que Dr. B. a deja recue, et de 750 fr. pour des travaux de maçonnerie faits à la maison de Dr. B. par M. L. depens compensés." When the attendance or report of a medical man is required in any medico-legal case, whether that be of a criminal or civil character, he is entitled to remuneration, according to the following scale:

"Chaque medecin ou chirurgien recevra, savoir—

1mo. Pour chaque visite et rapport, y compris le premier pansement s'il y a lieu—

| | |
|---|---|
| Dans notre bonne ville de Paris | 6 fr. |
| Dans les villes de quarante mille habitans, et au dessus . . . | 5 fr. |
| Dans les autres villes et communes . . . . . . . . . | 3 fr. |

2do. Pour les ouvertures de cadavres, ou autres operations plus difficiles que la simple visite et en sus des droits ci dessus:

| | |
|---|---|
| Dans notre bonne ville de Paris | 9 fr. |
| Dans les villes de quarante mille habitans et au dessus . . . | 7 fr. |
| Dans les autres villes et communes . . . . . . . . . | 5 fr. |

There are some extra allowances, when the medical man is required to perform analytical or other scientific experiments, in cases of suspected poisoning, to report on the state of articles of food, or drink, &c. &c.

Lastly, it is worthy of mention that medical men in France are entitled to demand remuneration, whenever they are cited as witnesses "soit devant le juge d'instruction, soit aux debats, à raison de leurs declarations, visites, ou rapports: les indemnités dues pour cette comparation leur sont alors payées, *comme à des temoins*, et leurs indemnités de route doivent etre les memes que celles des temoins."

We come now to a subject of still more interesting importance to medical men in France, we mean that of certain restrictive or prohibitory laws against their accepting a large donation from a patient during his life, or a large legacy bequeathed in his will. The words of the art. 909 of the civil code are these: "Les docteurs en medecine, ou en chirurgie, les officiers de santé, et les pharmaciens qui auront traité une personne pendant une maladie dont elle meurt, ne pourront profiter des dispositions entre-vifs, ou testimentaires qu' elle aurait faites en leur faveur pendant le cours de cette maladie: sont exceptés, 1, les dispositions remuneratoires faites à titre particulier en egard aux facultés du disposant, et aux services rendus; 2, les dispositions universelles, dans le cas de parenté, jusqu-au quatrieme degré inclusivement, pourvu toutefois que le decedé n'ait pas d'heritiers en ligne directe; à moins que celui au profit de qui la disposition a été faite, ne soit lui meme du nombre de ces heritiers. Les memes regles sont observées à l'egard des ministres des differens cultes." But as in many other cases of legal enactment, the prohibitions contained in the preceding causes may be easily evaded: thus a "donation" may be disguised under "la forme d'une rente," and no objection can be made; or it may be bestowed on the wife, children, or parents of the medical men, and it is equally legitimate; and the same holds true "ou il est etabli que les soins donnés par le medecin l'ont été par suite de l'affection qu'il portait au testateur, et que la liberalité été determinée aussi par l'affection, que le testateur portrait à ce medecin, bien avant sa mort."

So jealous, however, is the law of medical men exerting an undue influence over the minds of patients, that in certain cases of marriage having been contracted during a professional attendance, the husband has been dispossessed of property which may have been left him by his wife. Thus a Dr. Bonnet, in October, 1812, married a widow lady, who was then "malade et gisante dans son lit," and indeed suffering from the disease of which she died a month afterwards. By the marriage contract, the survivor was made sole residuary legatee of the other's property. The heirs at law of the wife disputed the legality of the contract; the cause was argued at great length before the "cour royale de Paris," and judgment was at length awarded against the doctor, on the ground that the "donations avaient eté faites dans le cours de la maladie dont il la traitait, et dont elle etait decedée.—*Jurisprudence de la Medecine.*

## OF THE DESICCATION OF THE UMBILICAL CORD.

When we are called upon to determine whether an infant has been born alive, or not, it will be found useful to attend to the condition of the umbilical cord among other enquiries. Whenever the cord exhibits the apearances of the ordinary shrivelling, which we observe in a child two or three days after birth —when, for example, it has become of a reddish-brown colour, is flattened and shrivelled, and its vessels are dried and almost obliterated, we may very safely infer that the child has not only been born alive, but has lived for some time after birth. On the other hand, when the cord is pulpy and soft, of a green colour, and presents other traces of putrefaction, the probability is, that the child has been still-born.

The normal desiccation of the cord takes place only during life, and may, therefore, be regarded as a stricly vital process. This sign is well worthy of the attention of the medical jurist, to whose consideration the following conclusions may be acceptable:—1, The desiccation of the umbilical cord takes place only during life—2, from the moment of death, the desiccation is altogether suspended, or proceeds at least very imperfectly—3, whenever the desiccation is considerably advanced, we may conclude that the child had lived for at least one day—4, the cord may indeed be soft, and putrefying, yet the child may have been borne alive; but it must have died soon after birth. When the cord putrefies, its outward integument or pellicle generally separates more or less from the inclosed vessels; but the cord itself does not separate, or become detached from the umbilical ring, as it is known to do when the desiccation has advanced sufficiently far. If,indeed, the body of a still-born infant be kept in circumstances calculated to retard putrefaction, it does sometimes happen that the navel-string becomes dry, and partially shrivelled, and does not exhibit any very obvious appearances of putrefaction; but the shrivelling is only partial—the cord retains its round form, and a certain degree of suppleness.

The following case occurred in the practice of M. Ollivier. He, along with MM. Marc and Denis, was ordered to inspect the body of a full-grown fœtus, which had been dead for at least eight or nine days, and was exposed in the "Morgue." All the organs were in the strate of putrefaction—the cavities were distended with gas—the lungs were quite decayed, and the umbilical cord, which seemed never to have been tied, had partaken of the general decomposition; instead of being dry, flattened, and twisted upon itself, as usually occurs, it had formed at its divided extremity a puckered sac, which resembled a portion of small intestine distended and dried, in consequence of the gelatinous nidus of the vessels having altogether disappeared, and nothing but the investing outer membrane remaining. The epidermis of the abdomen separated easily under the fingers, but the cord was still firmly adherent. The inference from the preceding particulars is, that the umbilical cord, in the present case, did not exhibit the appearances of the normal desiccation, but had undergone a mere putrefaction, like the rest of the body, a process which does not induce a speedy separation of the cord from the umbilical ring. This separation is, in truth, a strictly vital act, and not the effect of simple decay. It is to be observed that the cord is much more tardily affected with putrefaction than the other parts of the body.

The period at which the separation of the cord usually takes place after birth, is from the fourth to the sixth day. Orfila has stated, in his Lectures on Legal Medicine, that the cord begins to desiccate on the first day after birth, and that it usually becomes separated in four or six days. Sometimes there is a slight suppuration round the edges of the umbilical ring, which are then, puffy, and somewhat inflamed, before the cord is completely detached; and this is most frequently observed, when the ring or "bourrelet" of integuments advances for a quarter or half an inch on the cord. On the contrary, when this "bourrelet" is small, and not prominent, the separation of the cord is usually dry, and unattended with any traces of suppuration. It is improper, therefore, in medico-legal enquiries, to attach too much importance to the appearance of the umbilical ring, whether it exhibits a redness and other signs of any inflammatory action or not, when we are required to declare if the infant had died before, during, or after delivery. If asked, to what do we attribute the falling off of the cord, we should have no hesitation in replying, that it is the effect of the constriction which the desiccated lymph exerts upon the umbilical vessels, aided by the contractility, or, we should rather say, the tendency to close, of the edges of the ring, a tendency not peculiar to these, but which is invariably observed in all divided living structures.

Haller was certainly most extravagant in referring the separation to a gangrene of the cord; and M. Capuron has, as we have already stated, committed the error of supposing, that it was in all cases the effect of an inflammatory process. In perhaps the majority of cases, there are no traces of any inflammation having ever existed; and, moreover, even if it did always take place, it would not satisfactorily explain the falling off of the cord, as it is an admitted position in pathology, that bloodvessels "au milieu des parties enflammées ne s'enflammaient presque jamais."—*Billard*, *Traité des Maladies des Enfans.*

---

## EXFOLIATION OF THE EPIDERMIS IN INFANTS.

The attention of medical jurists has been directed to this subject also, with the view of determining the probable length of time which a child may have lived after its birth, and M. Orfila has endeavoured to methodize the observations made by preceding authors, as well as those which he has collected in his own experience.

It may be positively asserted that this cuticular exfoliation is so far a vital process, that it occurs only in living children, and, moreover, that it does not begin until after birth. There are no satisfactory examples of the genuine exfoliation having commenced while the fœtus was still in utero. We do not mean to deny the occurrence of separation, or, as it were, unglueing of the epidermis, in cases where a dead child has been retained for some time in the womb; this is well known to be of frequent occurrence, but such separation is essentially distinct, in its features and cause, from the phenomenon which we are at present considering.

M. Orfila has pointed out three different stages of the genuine cuticular exfoliation; the "travail preparatoire," which occurs between the sixth and eleventh days after birth—the "soulevement" of the epidermis, between the end of the third and the middle of the fifth week—and the "exfoliation," which is usually completed between the thirty-fifth and the fortieth days. Such is the result of M. O.'s investigations of this process, as it takes place in healthy children, and when it is not retarded by disease. The late Dr. Billard, who so diligently and so ably pursued the study of infantile diseases, collected a number of observations to test the accuracy of the preceding statements. The result of these was by no means favourable to Orfila's conclusions; for in thirty-two children, in whom the process of exfoliation was "en pleine activité, c'est à dire, de larges ecailles ou de zones très etendues d'epiderme s'enlevaient sur divers points de la surface du corps," 1 was only a day old—7, two days—8, three days—6, four days—6, five days—1, seven days—2, nine days, and 1 fifteen days old.

According to these data, the exfoliation makes the greatest progress between the second and fifth days after birth.

It would be incorrect, however, to lay down any very positive general positions on this subject; for we find that M. Billard states that, in other forty-two infants, whose ages varied from one to ten days, no appearances of the cuticular desquamation were visible; and again, that in some cases, the scales of the epidermis were so very minute, that they fell off in the state of a fine powder, and were indeed not to be observed at all. This is the "exfoliation insensible de l'epiderme" of French authors.

Dr B. is of opinion that Orfila is far too refinedly minute, when he speaks of three successive stages of the cuticular separation. The "travail preparatoire" is purely fictitious, for no sooner does the epidermis begin to exhibit any clefts or cracks, than a "veritable soulevement" takes place simultaneously; this "soulevement" is either by lines or furrows, by large plates or laminæ, or by furfuraceous scales, in different parts of the surface; thus, the first are generally seen on the skin of the abdomen and of the joints—the second on the chest, back, soles of the feet, &c. and the last on the cheeks, in the armpits, on the shoulders and arms, hips, &c.

With respect to the cause of the cuticular exfoliation in infants, Dr. Billard is inclined to consider it to be the drying which the epidermis, softened and relaxed by having been well soaked for several months in the liquor amnii, undergoes on exposure to the atmosphere. It is to be viewed, therefore, as a mere physical operation of inorganic matter. The new epidermis, it is well known, is extremely tender and delicate, and this circumstance ought always to be attended to in the management and treatment of infants in health, as well as in disease.

It must be unnecessary to caution any medical man against mistaking the separation of the cuticle, the result of putrefaction, from the process to which we have been alluding above. Independently of the other co-existing appearances of decomposition, the offensive smell, the green colour, &c. of the integuments, the peculiar appearance of numerous transparent, colourless, and gelatine-like fibrillæ between the cuticle and cutis vera, which are observed when we cautiously raise up the former membrane, are quite characteristic of putridity.—*Traité des Maladies des Enfans.*

---

## MEMORANDA RESPECTING CATARACT.

It has been often remarked, that cataract is one of those diseases, the tendency to which is obviously influenced by hereditary predisposition. The operation of this cause has been distinctly traced in upwards of 30 cases out of 120, admitted by M. Roux within the last few years into the Hôpital de la Charité. The particulars of one case are so curious, that they deserve to be noticed:—A woman, 30 years of age, was affected with cataract; her grandfather, one of her uncles, one of her aunts, and two cousins (all on the father's side), had laboured under this malady, and one of this woman's children was affected with the congenital disease.

M. Roux mentions that, some years ago, he operated for cataract upon three brothers, nearly about the same period; their grandfather, father, and also a younger brother, had all been cataractous.

The important practical question, whether cataract is generally apt to remain confined to one eye for a length of time, or not, is answered in the negative, if we may judge by the results of the 120 patients admitted into the hospital; for, out of this number, there were only two in whom there was but one cataract. We do not mean to assert that the disease was equally advanced in both eyes, but only that, when one eye was fairly cataractous, and had been so for a length of time, there were traces of the disease in the other. M. Maunoir is, therefore, led by these data to believe, that a cataract in one eye (or, perhaps, to speak more correctly, the cause which has produced it) seems to exert, in almost every instance, a hurtful influence upon the other.

The results of the operations (by extraction) have been more favourable to individuals than to single eyes; 73 patients out of 115 recovered their sight —but only 97 operations out of 179 were successful. In thirty of the unsuccessful operations, a secondary cataract, accompanied with or without partial opacity of the cornea, or sometimes with injury and displacement of the pupil, was formed; in fourteen, the eye was destroyed by suppuration; in nineteen the cornea became completely opaque, and in one case the pupil became altogether closed; in the remaining eighteen cases, the lesions were of a complicated kind.

Surgeons have differed in opinion as to the propriety of operating upon both eyes, when cataracous, at the same time; the experience of M. Roux is favourable to the practice, as the proportional success which he obtained in 64 cases in which the double operation was performed at one sitting, was greater than in 48 other cases, in which only one cataract was extracted at a time. The most serious accident which may attend the operation of extraction is, according to the results of the 120 cases, the partial escape of the vitreous humour. In 19 cases in which this unfortunate accident occurred, six only of the patients recovered their sight. The wounding of the iris is a much less unfavourable accident.

It is worthy of notice, that the operation of extraction is that to which M. Roux almost invariably gives the preference; at the Hôtel Dieu, on the contrary, the "abaissement" or couching, is very generally performed.—*Essai sur la Cataracte*, *par M. Maunoir de Geneve.*—*Paris*, 1833.

---

## MEDICAL SUPERSTITIONS IN SOME PARTS OF FRANCE.

A humiliating, but nevertheless an instructive, page of man's absurdities, is furnished by the consideration of the truly ridiculous, and most irrational usages of different countries in the treatment of the prevalent diseases by some of the lower orders. In the mountainous districts of the Haute-Loire, it is a very common custom among the inhabitants to treat pleurisies, pneumonias, and indeed, almost all active diseases of the chest (and these are by far more frequent than any other class of affections) by applying on the ribs, over the seat of pain, a gutted cock or a tom-cat, if the patient be a male, and a gutted hen or a she-cat if the patient be a female; the correspondence of sex between the medicated and the medicant animal is believed to be quite essential to the perfection of the cure!

The modus operandi of this singular remedy is referred by the Haute-Loirians, to the dead body acting as a magnet to the "mauvaises humeurs de la poitrine," which are supposed to be the cause of the inflammatory disease. After remaining for four and twenty hours applied, it is removed; and, should it then emit an offensive smell, these credulous people imagine that it must necessarily have acted beneficially, and that the incipient decay is solely attributable to the "pourriture" which it has drawn from the patient's body. The above is the first step in the treatment—the second is that of the patient forthwith swallowing the blood of the victim, which has already purified his blood: "tout cela est au moins bien pitoyable;"—truly it is!

Such is one of the methods employed in this rude part of France to remove an alarming disorder. At other times, recourse is had to an "amalgame informe" of melted lard, rancid oil, soot, black pepper and urine! Well may a Frenchman exclaim—"Ne faut il pas avoir un estomac de cheval pour pouvoir avaler et digerer un ragout aussi horrible;" for our part, we much doubt whether even a horse's stomach could tolerate such a mess. When the enduring powers of the poor patient's stomach are too feeble for this potent medication, a substitute is found in a variety of heating stimulating drinks, prepared with acrid drugs, and with wine, spirits, and pepper. So much for pneumonias, &c.

Phthisis pulmonalis is combated with a savoury julep of goose-dung in white wine; incontinence of urine, with omelet of roasted rats; peritonitis, with a "boisson" composed of cat's blood and menstrual discharge; tinea capitis, by Gulliver's renowned method of extinguishing fires, viz. "par uriner, quelques jours sur la tete de l'enfant." Severe puerperal after-pains are treated in the Haute-Loire, as indeed in many other countries, by making the women swallow some of the uterine discharges. We need not proceed in our enumeration of such "grossieretes." Satis superque.—*Journal Hebdomadaire.*

### RHINOPLASTY PERFORMED BY DIEFFENBACH AT THE LA PITIE' HOSPITAL.

The case was that of a woman, who had lost the greater part of her nose by the destructive effects of a lupous ulceration. M. Dieffenbach happening to be in Paris at the time, was requested by the surgeons of the La Pitie Hospital to perform the operation of rhinoplasty, which, it is well known, he has contributed so much to improve and establish. Having traced on the forehead the shape of the flap which he proposed to employ, (it was of the shape of an ace of clubs, the apex pointing downwards, between the superciliary ridges,) he quickly made the necessary incisions, and dissected it from the pericranium; he then divided the integuments covering the root of the nose, pared the edges ef the nasal apertures, and "traversé de part en part la racine de la levre" at its union with the septum narium. Having done all this, he proceeded to draw and to keep together as well as was possible, the edges of the wound of the forehead, by means of an interrupted suture.—The pedicle of the flap, reverted or turned once upon itself, was now carefully fitted in between the lips of the incision which had been made through the integuments covering the root of the nose, and several needles were placed above, for the purpose of preventing the pedicle from being in any way displaced. Having completed this, M. D. then fixed the appendix (we suppose that portion of the flap corresponding to the shaft of the spade) intended to form the "sous-cloison" of the new nose, in the opening or incision which had been made through the root of the upper lip, and retained it in this position by means of one or two needles. At this period of the operation, the flap, being held by its two extremities, formed, as it were, "voile flottant" in front of the nostrils. The remaining steps were the adjusting and retaining in contact, by means of several twisted sutures, the edges of the flap, with the pared edges of the alæ nasi, and the introducing of a small cylinder of rolled lint into each nasal opening, for the purpose of supporting the newly-made member. The exposed ends of the needles, which had been used in making the twisted sutures, were snipped off by strong forceps. The operation lasted for rather more than half an hour. The points to which M. Dieffenbach most strongly directed the attention of the spectators were—1, the necessity of making the appendix, which is to form the "sous-cloison," of a sufficiently ample size, that it may not be destroyed by supervening ulceration or gangrene; 2, the permitting the flap to bleed freely, before it be applied to the nose:—in most cases the oozing will have ceased by the time that the wound of the forehead has been dressed: and 3, the injurious effects of plugging the nostrils with too large rolls of lint after the operation has been completed.—*Journal Hebdom.*

## III.

## CLINICAL REVIEW.

### GLASGOW ROYAL INFIRMARY.

### REPORT ON TUMOURS. By DR. MACFARLANE.*

WE have at various times extracted many important facts from the volume of Clinical Reports before us. That volume being strictly a collection of cases is of permanent utility and character; at all events, it has served and will serve us again for a granary, from which to extract sound and wholesome nutriment.

The subject of tumors has occupied the attention and exercised the ingenuity of surgeons of eminence and talent. Their aim has been to nosologize the varieties of morbid growths, and to classify and distinguish their separate forms. Were these forms determinate, and were they *always* separate, the task would still be difficult, and the attempt might fail. But, unhappily, various tumors are convertible into each other, and what commenced as a simple enlargement of some natural structure, may, under circumstances with which we are imperfectly, if at all acquainted, become converted into the most formidable malignant alteration. When we add to this vital difficulty the consideration that the external distinctive marks of tumors are absolutely vague, that their differences of structure are imperfectly appreciable by dissection, and that, little as we know, the powers of description are unable accurately to convey even that, we think we may offer a reasonable solution of the causes why so little real progress has been made in this department of our science. We are rather surprised at what has, than at what has not been done, at the definiteness of our knowledge, not its looseness. How much has been effected since the days of Mr. Pott and Mr. Hey in determining the history of scirrhus and of fungus hæmatodes—how gratifying is our power of saving, in consequence of our advance in diagnosis, many breasts and many testicles that would formerly, we mean twenty years ago, have been sacrificed. None can bound the progress of human knowledge, none can say, "Thus far and no farther wilt thou go." The sciences are so dovetailed and entangled, that the progress of one drags the other forward. If morbid anatomy would seem to have exerted almost all its strength in accomplishing diagnosis and in circling treatment, we cannot affirm, and we will not suppose that chemistry and botany have exhausted theirs.

Sixty-one pages of Dr. Macfarlane's volume are dedicated to the report on Tumors. The magnitude of the space is not disproportioned to that of the subject. The hospital surgeon, constantly in the habit of witnessing such cases, may peruse with indifference reports of this description. But hospital surgeons are a trifling minority in the profession, and the members who unfortunately are debarred from the advantages which those gentlemen possess, must find in the pages of journals or of books, the best substitute for them which they can. The philosophical principle of the greatest good to the greatest number, is as applicable in the world of medicine as of politics.

Dr. Macfarlane adopts the classification of tumors originally proposed by Mr. Abernethy. It is not good, but it is the best. Our readers, then, must understand by adipose sarcoma, pancreatic sarcoma, and so forth, tumors possessed of the characters described under such designations, by the eminent surgeon to whom we have alluded. For the sake of convenience of description, our author reports on tumors of the head and neck, tumors of the mamma, and, finally, tumors of the abdomen.

### 1. TUMORS OF THE HEAD AND NECK.

Adipose tumors of the scalp are unfrequent. Dr. Macfarlane relates two cases, in one of which the disease was confined to the subcutaneous structure, whilst in the other it was situated beneath the occipito-frontalis. We shall abbreviate the already abbreviated details.

---

* Clinical Reports of the Surgical Practice of the Glasgow Royal Infirmary. By J. Macfarlane, M.D.

CASE 1. "W. J., æt. fifty-four, had a large, prominent, well-defined, and doughy tumour, about the size of a small orange, situated over the centre of the left parietal bone. Its origin was attributed to a blow he had received on the part about three years before, and since that time it had been slowly increasing. It was freely moveable over the subjacent parts, but firmly adherent to the integuments, which retained their natural colour. Its surface was traversed by several enlarged veins. It was broader and more expanded at the apex than at the base;* and it only gave him pain when compressed by the hat, or when otherwise subjected to external irritation."

The tumor appearing to be adipose sarcoma was removed from the subcutaneous cellular tissue to which it was confined. It was enveloped in a fine cyst, and in the centre the adeps was considerably condensed. On the third day erysipelas supervened, superficial sloughing of the wound ensued, but the patient ultimately recovered.

CASE 2. *Adipose Sarcoma beneath the Occipito-frontalis.*

"J. G., æt. forty-seven, had had a soft flat, ill-defined tumour, growing over the centre of the occipital bone, for about five years, when he applied at the Infirmary to have it extirpated, in August, 1831, and for which he had previously used a variety of local applications without benefit. On proceeding to remove it with the knife, I found it covered by, and intimately adhering to, the occipito-frontalis muscle, which was much thickened. The wound healed without difficulty, and no untoward occurrence took place. On dissecting the tumor, it was found to be composed of adipose matter, contained in a distinct cyst, and much flattened in shape by the resistance to its developement, produced by the tendinous expansion under which it was situated."

We need only allude to two observations of our author's. He, then, is satisfied, and, probably, he is correct, that where sutures are employed for retaining the edges of a scalp wound in contact, erysipelas is more frequent than when ordinary dressings are resorted to. The second observation has reference to the difference observed in the tumor in the two preceding cases. In the first, where little compression was exercised, the growth was pendulous and large; in the last it was broad, and flat, and ill-defined, in consequence of the pressure of the occipito-frontalis. It was on the observation of such facts as these that the treatment of cancer by compression was founded, a treatment which was not found to succeed.

Dr. M. relates an interesting case of encysted tumor of the scalp; interesting, because it illustrates the fact that a morbid growth, which is commonly innocent, may, under peculiar circumstances, assume a malignant character. Before we make any further remark we will lay the case before our readers.

CASE 3. *Encysted Tumor of the Scalp Fungating.*

A. M'D., æt. sixty-five, entered the Infirmary on the 18th June, 1826, to have a tumor removed from his head. It was situated over the centre of the left parietal bone, to which it adhered intimately, and was about the size of a pigeon's egg. It was deeply ulcerated; the edges were thickened and everted; the surface had an irregular cauliflower appearance; the discharge was ichorous; and the pain acute and lancinating. This tumor had existed for eleven years in an innocent state, similar to other two of the common encysted kind, on the opposite side of the head; when, after a bruise, it became painful, inflamed, and ulcerated. It was extirpated. Erysipelas succeeded, and the wound was long in cicatrizing, but the patient has had no return of the disease.

---

* We do not exactly perceive how a thing can be broader at the apex than the base. This looks like a Hibernicism.—*Eds.*

Sir Benjamin Brodie is in the habit of mentioning, in his Clinical Lectures, more than one case of this description. Dr. Macfarlane remarks that he has witnessed two other cases of the kind. In one of them, amputation of the penis for cancer had been resorted to a few months before the tumor on the head assumed the appearance of malignity. This patient died from the propagation of the disease to the inguinal glands.

It has been frequently observed by judicious surgeons, that malignancy and non-malignancy are terms which should not be too positively employed as distinctive characters of tumors. There are various grades of both conditions, and, perhaps, the very extremes are convertible. With respect to malignant tumors, this is certain—that some possess in a much more eminent degree than others the power of contaminating the general system. Fungus hæmatodes is more virulent in this respect than scirrhus, and from scirrhus to some simple chronic enlargements of glandular structure, the shades are numerous and the distinctions faint. The encysted tumors which fungate, as in Dr. Macfarlane's case, appear to influence the system but slightly, perhaps they may not sensibly injure it at all. Yet they do not seem susceptible of a natural cure, and the knife is required more for their removal, than for the preservation of the constitution.

Tumors in the neck are frequent, and their removal by an operation is often required. Those operations are delicate and dangerous from the situation and complexity of the great cervical nerves and vessels, and the depth and extent of the connexions of the morbid growth. Those tumors which arise, as some do, from the external surface of the platysma muscle are, of course, not deep, though they may be extensive; they are, therefore, extirpated with comparative facility. But when the tumor springs from beneath the fasciæ, a knowledge of anatomy would lead us to expect what experience serves to confirm, that the operation is proportionately difficult. The first case we shall cite is one of chronic abscess in the neck.

CASE 4. *Chronic Abscess in the Neck.* C. M'P. æt. 20, admitted 12th April, 1832, having been sent by a surgeon, from the island of Mull, to have a tumor extracted from her neck. It was seated in the left side, having the sterno-mastoid muscle for its anterior, and the trapezius for its posterior boundary. It dipped under the middle of the clavicle, and extended to within an inch of the mastoid process of the temporal bone. It was covered by sound integuments, and had a firm, resisting feel, except a small spot in the centre, where obscure fluctuation was discovered. When first observed, a year and a half before, it was about the size of a pea. It increased slowly, but never was the seat of acute pain. Her general health was good.

A consultation produced, as usual, several opinions. Dr. Macfarlane, however, punctured the tumor, and evacuated seven ounces of healthy-looking pus. The sac gradually filled by granulations, and a cure ensued.

"When," says our author, "an encysted tumor forms in the subcutaneous cellular texture, the fluid nature of its contents can be easily ascertained; but when it is situated below the fascia, its progress externally will be considerably impeded, and the sense of fluctuation rendered much more obscure. Even in this latter situation, however, the nature of the tumor may be correctly ascertained by careful and deliberate examination, except when the cyst is greatly thickened. But it sometimes happens that the cyst, although thin, is so completely distended with the fluid, as to give the tumour a hard, tense feel. When a tumor, so distended, is situated in the abdominal parietes, I have seen expert surgeons foiled in detecting fluctuation, because they could not fix it against any hard resisting body, so that the requisite degree of pressure might be applied. It is still more difficult to ascertain, before it has been punctured whether the sac contains pus or serum. Every surgeon of common observation must have seen chronic abscesses in which little or no pain was present, and where months elapsed before the tumors attained to any great size. In such cases it is hardly possible, by external examination or by accurate attention to the history of the disease, to know whether the tumor is filled with pus or serum. Nor is the distinction, in general, of much practical importance."

Dr. Macfarlane does not allude to an important means of diagnosis in all tumors, an experimentum crucis in all but very deep ones. We allude to the operation of puncturing the tumor with a grooved needle. The fluid, if there be any, lodges in the groove, and betrays the contents of the tumor. The surgeon is ignorant or confident who hesitates to avail himself of this useful mode of exploration.

In the last number of this Journal we analysed a paper by Dr. O'Beirne, of Dublin, on encysed tumors of the neck containing water. That paper is highly deserving of attention, and its perusal may be associated with the cases we are now relating.

Acute abscess beneath the fascia of the neck is unnoticed by our author. Yet it is a serious and not very uncommon affection, and its seriousness is perhaps increased by the mistakes often made as to its nature. The tumor spreads laterally, rather than advances towards the surface, the fluctuation is obscure, the redness of the surface not considerable, and generally there is œdema of the subcutaneous tissue. The general symptoms are at first those of inflammatory, afterward those of typhoid fever. If incisions are not made the integuments slough extensively, so do the deep cellular tissue and the fascia, and very formidable the mischief is. We have seen the integuments of nearly one side of the neck destroyed, and the lower jaw exposed, and killed by mismanaged abscess of this description. The treatment is obvious, and should be decisive—early and deep openings, assisted by all powerful antiphlogistic local treatment.

We proceed to another subject.

CASE 5. *Encysted Tumor over the Parotid Gland—Extirpation—Salivary Fistula.*

J. S. æt. 24, admitted 10th December, 1826. First observed, about eighteen months before, without any evident cause, a small elastic tumor, below the lobe of the right ear, and between the angle of the jaw and the mastoid process of the temporal bone. It was globular, had an elastic fluctuating feel, was larger than a hen's egg, and free of pain, even when roughly handled. It was covered by healthy integuments, and appeared to dip rather deeply, and to impede the free movement of the lower jaw.

The tumor was evidently encysted, its contents fluid, and Dr. Macfarlane determined to dissect it out. It was found firmly bound down by the fascia. During the dissection the sac was accidentally opened by a hook, when a considerable quantity of limpid fluid was discharged. The relaxed cyst, which was found adhering intimately to the outer edge of the masseter muscle, to the angle of the inferior maxilla, to the interior edge of the sterno-mastoid muscle, to the parotid gland, and to the cartilage of the external ear, was then separated, leaving a deep cavity behind the angle of the jaw. On its being dissected from the parotid, a small portion of the capsule, was removed, and the granular texture of the gland exposed.

Erysipelas came on about the sixth or seventh day, but on the 21st of January, the patient was dismissed with the wound healed to a mere point, from which no saliva was discharged. Three weeks, however, after leaving the infirmary, she became subject, during mastication, to profuse discharges of watery fluid, through a small opening in the centre of the cicatrix, which had never healed. By applying the nitras argenti freely and frequently to the fistulous opening, and to the surface of the parotid gland from which the saliva flowed, and by the use of firm and continued pressure, for some weeks,—by means of graduated compresses and a bandage,—a cure was accomplished.

"We are told by Burns, that the inferior lobe of the carotid gland may become sacculated, so as to give rise to a tumor behind the angle of the jaw, formed by an accumulation of saliva. When this happens, I presume we are entitled to expect that there shall be a direct communication between the gland and the cyst; for upon no other principle can we account for the gradual increase of saliva, which must take place as the tumor enlarges. Should this explanation hold good, then it follows that in the above case the tumor was a common encysted, and not a salivary one, attached to, but not incorporated with the parotid gland; because, on examining the cyst, which was removed entire, there was no opening found on its posterior surface by which fluid could be conveyed to it from the parotid. This opinion is not invalidated by the subsequent occurrence of fistula, which owed its origin to the accidental injury of the gland during the removal of the cyst."

Two cases of tumor in the neck are next detailed. One had the characters of medullary, the other of tuberculated sarcoma.

CASE 6. *Medullary Sarcoma (?) in the left side of the Neck—Operation.*

To abridge the features of the case or the description of the operation would only be to deprive both of their value. We therefore subjoin them in the narrator's words.

"M. S., aged forty-six, was admitted on the 5th of February, 1827, and the following particulars of her case entered in the journal;—

'There is situated over the angle of the jaw, on the left side, a tumor, considerably larger than the fist, which extends from the edge of the sterno-mastoid muscle, as forward as the chin. It has an irregular shape; is distinctly lobulated on the surface, to which the integuments are firmly adhering; projects considerably, and is somewhat flattened on its summit. It has a firm, resisting, but in some parts a slightly elastic feel; is closely attached to the parts beneath; and its surface is traversed by the external jugular, and by several other venous branches of considerable size. When examined from the mouth, it appears to be firmly fixed to the lower jaw, below the alveolar processes; but it can only be felt indistinctly, by pressing with the finger under the tongue. It measures in circumference, at its base, twelve inches, and at its apex seven inches. Its diameter from above, downwards, and from before, backwards, is five inches; and it projects two inches beyond the jaw-bone, and about three inches beyond the edge of the mastoid muscle.

The tumor, when first observed, nine month's ago, was about the size of a small nut: it was seated between the sterno-mastoid and the angle of the jaw, and was hard, moveable, and free of pain. It increased rapidly—became the seat of obtuse pain; and she says that, during the last fourteen days that portion of it which stretches to the angle of the mouth has formed. It impedes deglutition and mastication, and she thinks has affected her health.'

"On the 10th of February, the tumor was extirpated, but with greater difficulty than I expected. It adhered very intimately to the common integuments, and the fascia covering it was much thickened. I began to detach it at the posterior part, where it passed deeply under the angle of the jaw towards the base of the cranium, and proceeded forwards, dissecting it from the side of the face, from the inferior maxilla, and from the neck over the larynx and trachea. It adhered firmly to the lower jaw for about two-and-a-half inches; and here the bone was denuded of periosteum, rough, and had a cribriform appearance. Two of the submaxillary glands, which were enlarged, were also removed; and the several parts with which the tumor was connected were distinctly seen. It had extended back as far as the styloid process of the temporal bone; and besides the sterno-mastoid, digastric masseter and buccinator muscles, which were more or less exposed, the sheath of the vessels was laid bare, through which the pulsations of the carotid were visible. Five arteries were tied; and as there was little chance of procuring adhesion, the hollow under the angle of the jaw was filled with lint. Two stitches were inserted, and the parts supported by straps, compress, and bandage. The hæmorrhage which occurred was chiefly venous, and took place from the superficial veins, and from a large vein attached to the anterior part of the tumour. The external jugular escaped being injured.

On examining the tumour after its removal, it presented a soft, greyish-coloured texture, not unlike carcinoma, but without the fibrous bands or stony hardness peculiar to this morbid growth. In the centre, there was a cyst about the size of a walnut, which contained a soft, greyish-coloured matter, about the consistence of cream. This was mixed with clots of blood; and there were three similar cysts in other parts of the tumour, corresponding to the nodules observed externally previous to the operation."

On the next day, there were difficulty of swallowing and dyspnœa, apparently dependent on irritation of the bottom of the wound. These symptoms continued for four days, after which nothing untoward occurred, and she was speedily dismissed cured.

Our author observes, and we think with justice, that the tumor observed a closer similarity to medullary sarcoma, than to any other morbid growth. We need scarcely tell our readers, and we certainly need not hint to Dr. Macfarlane, that the healing of the wound, and dismissal of the patient, are seldom in such cases synonymous with ultimate recovery. Too many patients have been said to have been cured by operations which ultimately failed, operations, we mean, performed for the extirpation of malignant tumors. Those bloody beacons, like the false lights of wreckers, have blazed but to betray, and the surgeon and the patient have often been lured on by their lying lustre, to perform and to submit to barbarous repetitions of equally unsuccessful butchery. Our author does not tell, and we will not guess, what the termination of the last case has been. But if the disease was really what it seemed to be—medullary sarcoma, it will sin agreeably against our experience, if that termination has not been disastrous.

CASE 7.—*Tubercular Sarcoma in Left Side of Neck.*

Mr. M'G. æt. 45, admitted Sept. 27, 1831. There was situated behind the left angle of the jaw, a firm, irregular, and partially circumscribed tumor, about the size of a hen's egg, which was somewhat flattened, and admitted of very limited motion. It extended from the mastoid process over the ramus of the jaw, and appeared to pass deeply behind the angle of that bone. It pressed up the lobe of the ear, and extended along the cheek, fully half-an-inch beyond the usual situation of the parotid duct. This tumor, when observed for the first time, three years before, was about the size of a walnut; but it was only within the last four months that it began to increase perceptibly, and to be accompanied with pain.

"On slightly depressing the head towards the left shoulder, and grasping the tumour firmly, it admitted of such a degree of motion, even in the limited and confined space in which it was situated, as led me to believe that it was capable of being extirpated. Accordingly, on the 30th, I succeeded in removing it, after a cautious dissection. Its posterior attachments were so firm and intimate, that they had to be divided with the knife, which was done close to the tumour. It was found covered by, and intimately adhering to, the inferior lobe of the parotid gland, which was also removed. The parotid duct did not present itself to view, but every precaution was taken to avoid it. Only two arteries required the ligature; and one of these was the occipital, about an inch of which was intimately adhering to, and removed along with the tumour. The edges of the wound were retained in apposition by three points of suture, over which a thick compress and double-headed roller were applied."

Erysipelas followed, but subsided under antiphlogistic treatment. On the 20th of October she was dismissed cured.

Examination of the tumor disclosed

the following characters:—It had an irregular shape, a tuberose surface, and was surrounded by a dense fibrous covering. A section of it displayed an assemblage of small yellowish-coloured tubercles, about the size of mustard-seeds, apparently united by cellular texture. There were a few white fibrous bands in the centre; and near the circumference, where the tumor was attached to the parotid, there was a small portion, about the size of a sixpence, where the texture was more distinctly granular, and resembled that of one of the salivary glands.

Dr. Macfarlane remarks, with perfect propriety, on the excessive difficulty of classifying these tumors, even after their stricture has been exposed by sections. The fact is, that the arrangement recommended by Mr. Abernethey, though better, perhaps, than any other, is a bad one, wanting, as it does, the most essential requisite for an accurate classification, distinctions which are readily appreciable. This is principally due to the convertibility of morbid structures—to the want of any real barrier between many which are separated by art. The tubercular, pancreatic, and medullary sarcoma run into each other, and surgeons can seldom be found to agree on the nature of the tumor prior to an operation; sometimes, indeed, not after its stricture has been exposed by the knife. Perhaps the difficulties attending an accurate diagnosis are insuperable; perhaps they may be conquered by chemistry, or the minute anatomy of structure. A confession of our present ignorance is indispensable.

A remark or two on tubercular sarcoma, and we pass to tumors of the breast. Mr. Macfarlane observes, with respect to it—

"Mr. Abernethy considers tuberculated sarcoma to be a very malignant disease; but I have had several opportunities of observing that this is not always the case. I have seen more than one instance in which such tumours have remained for years in a perfectly quiescent state, without exciting either local pain or constitional disturbance. I recollect, in particular, of examining, when in Strathaven, in the summer of 1827, a young, healthy, athletic man, who had had a tumour of this kind on the left side of the neck, fully the size of a child's head, which had continued for years, and incommoded him only by its bulk. He refused to submit to its extirpation; and I was informed lately, by a medical student from that place, that he continues in good health, and that the tumour appears to be stationary."

We have seen two or three cases of tumors in the neck, exactly corresponding to the tubercular sarcoma of Mr. Abernethy. They resisted all remedies. One was removed by operation; but the disease returned. Yet the tendency to affections of other organs appears to be much less in this than in instances of genuine medullary disease.

We lately saw a specimen of tubercular sarcoma in the cat. It was brought to the new anatomical school, near St. George's Hospital. We made a section of the tumor, which now forms a preparation in the museum of the school.

We omit two cases—one of medullary sarcoma of the shoulder, in which erysipelas succeeded the operation and proved fatal—the other, adipose sarcoma on the back. We omit these, to proceed to the second part of the report.

## II. On Tumors of the Mamma.

The cases reported are, without exception, instances of malignant disease—medullary sarcoma, or scirrrhus. Dr. Macfarlane commences with the candid, and, we think, the judicious admission, that when the whole mamma is diseased, its removal is rarely attended with success. But we do not agree with him in thinking, that when merely a small defined and circumscribed tubercle exists, the operation is much more advantageous. So far as we have learnt from those whose experience has been great, and so far as we have seen in the more limited circle of our own, the extirpation of cancer under any circumstances, and at any period, offers but a gloomy prospect for the patient.

Yet we cordially concur with Dr. Macfarlane, and with all who recommend an early employment of the knife; for, if there be any chance, it is then; and the surgeon is not justified in throwing it away.

We have already hinted, and we more explicitly repeat, that the faith of some in the cures of malignant disease appears to be ready and capricious. Satisfied with the cicatrization of the wound inflicted by the knife, and with the patient's departure from the hospital, they do not investigate the subsequent occurrences, or, at all events, they do not inform us of them if they learn them. It is this ready method of publishing cures of cancer by an operation, that has led to extensive and pernicious error. It is a practice which cannot be reprobated too strongly, because it is subversive of the best interests of science, of philosophy, and truth. In the report before us, we have three instances of carcinoma of the mamma, attended with enlargement of absorbent glands, and one case of medullary sarcoma of the organ, accompanied with a large tumor in the axilla, in which the operation might be stated to have made a cure. In all the wound healed, and all were dismissed, apparently restored to health. But Dr. Macfarlane very properly indulges in the following train of reflections. Speaking of one of the cases alluded to, he observes—

"The carcinomatous structure of the mamma, as well as of the axillary glands, was distinctly marked,—the disease being in various states of progression. In some places it had the firmness of cartilage, and in others it was soft and friable. When this breaking up of the original tumour takes place, the neighbouring lymphatic glands become speedily involved in the same diseased changes. I have never known an instance in which an operation performed in such circumstances was ultimately successful,—the disease always returning, and that at no distant period. We will even find the same want of success in our operations for carcinoma of the mamma, although the diseased axillary glands bear no resemblance to the texture or appearance of the original tumour. Sometimes these glands are only sympathetically affected; and, without participating in the morbid process going on in the breast, they may altogether disappear. I have seen this happen to enlarged glands, above the clavicle, which appeared to be connected with a scirrhous mamma; but, as this result is comparatively rare, we ought not to rely on the spontaneous disappearance of such tumours, and allow them to remain when we proceed to the extirpation of the disease. I am afraid, therefore, that an operation will be altogether hopeless, when the axillary glands, as in the last three cases, have not only participated in the morbid action, but also in the structural changes of the adjoining disease. It is easy to exhibit, from the records of public hospitals, a lengthened list of successful cures; the individuals having not only recovered from the immediate effects of the operation, but where, for some time after their dismissal, no vestige of the disease can be discovered. That a few of these cases may be cured permanently I am not inclined to deny; but were the whole watched, and accurately traced for a few years, it would be found, in nine cases out of ten, that a return of the disease would take place in the vicinity of the part from which it was extirpated."

We shall only select five cases, and a few incidental remarks. The remainder display, what, alas, is too familiar, the ordinary history of this baleful malady.

Case 8.—*Carcinoma of both Mammæ —Diseased Axillary and Supra Clavicular Glands—Subcutaneous Tubercles.*

Mrs. L. æt. forty-six, and the mother of several children, was admitted on the 1st May, 1826. Both breasts were enlarged, slightly irregular, of a stony hardness, and especially the left one adhered intimately to the parts beneath and to the skin, which was in some parts slightly discoloured, thickened and tuberculated. The left nipple was retracted, and surrounded by a hard scabby areola; and, in addition to a diseased enlargement of the axillary and cervical glands, the integuments of both breasts, as well as those on the front of the thorax and abdomen, as low as the umbilicus, were thickly studded with small, hard, discoloured, and painful tumors, which appeared to be situated in the subcutaneous cellular texture. The disease commenced about a year before, in the glandular substance of both mammæ, at nearly the same time; and after six months' duration, the subcutaneous tubercles began to form. She left the Infirmary in the beginning of June, after having tried a variety of local applications without any benefit. Previous to her death, which occurred in about six months, ulceration of the left mamma, and of a number of the tubercles, took place, and ultimately thoracic disease supervened.

"I have only seen other two cases in which there existed the same tendency to the formation of scirrhous tubercles in the subcutaneous texture,—a combination with carcinoma of the mamma which is not frequently met with. The first patient was an emaciated, unhealthy old man, who, after having had, for several months, a distinct carcinomatous tumour in the left breast, was affected with painful tumours under the skin in different parts of his body, several of which proceeded to ulceration. In the other, about four months after a scirrhous mamma was extirpated, the edges of the cicatrix became indurated, painful and livid; but, before it gave way, subcutaneous tubercles formed, and the disease proved speedily fatal.

The origin of these tubercles, which have all the characters of scirrhus, is to be ascribed to constitutional and not to local causes, as is evident from the fact that they may form during the progress of a carcinomatous mamma in the external surface and in the internal cavities of the body, to which parts it is impossible that the diseased action could have been communicated through the medium of the absorbents. Their existence must be, therefore, considered as contra-indicating the use of the knife, even should the disease of the breast be otherwise favourable."

We have seen a number of subcutaneous tubercles surrounding a scirrhous breast in two instances, and encircling a malignant tumor in the neck in one instance. In none of the patients was an operation ventured on. In one exceedingly remarkable case, which occurred at St. George's Hospital, a patient was covered almost universally with subcutaneous scirrhous tubercles, although no other malignant tumor was discoverable. We are ignorant of the result. We perfectly agree with Dr. Macfarlane in rejecting the knife when these formations have appeared.

CASE. 9.—*Carcinoma of the Left Mamma — Operation — Dysentery — Death—Scirrhous Tubercle in the Uterus.*

H. M. æt. 51, married, but childless, admitted Aug. 3, 1831. The left mamma was almost converted into an irregular tumor of a stony hardness. The integuments were unaffected. There were three enlarged glands high up in the axilla. The bowels were loose; and the patient had suffered for many years from dyspepsia. On the 7th, at the patient's urgent request, the mamma and diseased glands were removed. Both exhibited a carcinomatous structure. On the 16th, dysentery commenced, and on the following days it was decisively established. On the 19th she died. The mucous membrane of the intestines was not found actually in a state of ulceration; but displayed in different places elevated and ecchymosed patches, with a texture softened and pulpy. There was a small scirrhous tubercle in the substance of the uterus. We subjoin the brief remarks of Dr. Macfarlane.

"From the external condition of this mammary tumour, and from its structure on dissection, it was evidently carcinomatous; and the fact of a tubercle existing at the same time in the body of the uterus, and possessing the same morbid appearances, showed the disease to be constitutional. There was, however, a symptom a-wanting which almost uniformly accompanies this disease, viz. pain. I have only seen another case in which the breast advanced to ulceration, and the disease proved fatal without creating the slightest uneasiness; but there existed in this case severe pains in the arms, legs, and back, which I have frequently observed during the progress of this malignant affection, both when seated in the external parts and in some internal organ. When present, I am inclined to consider them as certainly indicating the existence of a constitutional tendency to the disease; and I have uniformly observed, that should an operation be had recourse to under such a combination, the disease will, at no distant period, show itself in a different part of the body. It constitutes what Sir A. Cooper has not inaptly called cancerous rheumatism."

The chief interest attaching to the case appears to us to be the co-existence of the uterine scirrhus, with that developed in the mamma. The danger to be dreaded at the present day is the performance of unnecessary operations, and the object of those who write for the instruction or amusement of the profession should be to discountenance the barbarous practice. It is on this account we have quoted the judicious opinions of our author, on this account we dwell on the unprofitable subject of malignant tumors, and on this account that we draw attention to this case. At a time when there was no evidence of contamination of other organs than the mamma and the glands of the axilla, the uterus was actually invaded by cancer—an instructive instance of how little worth is local treatment for a malady essentially seated in the constitution.

The next case we shall select is one of scirrhous tubercle, not in the mamma but attached to it. Dr. Macfarlane is of opinion that scirrhus in this form is generally slow in its progress, and more favourable for extirpation than when the gland is itself affected. But to the case.

Case 10.—*Carcinomatous Tubercle of the Left Breast.*

Mrs. S. æt. 50, the mother of three children, admitted August 29, 1831. About a year before, she observed a hard, painful, and circumscribed tumor, about the size of a walnut, attached to the outer edge of the breast, near the axilla. It did not increase, but the paroxysms of pain to which it gave rise gradually became more frequent and severe. There was no disease in the axilla. General health good. Catamenia ceased six years before. On the 18th September, the mamma was removed, and on the 11th of October the patient was dismissed cured.

On inspecting the breast, the tubercle, which was in a scirrhous state, was found firmly attached to the outer edge of the mamma. On making a section of the tumor, condensed fibrous bands could be distinctly traced into the glandular substance of the breast, to a considerable distance from the point of its external attachment.

"I cannot agree," says our author, "with Sir A. Cooper, when he asserts that scirrhous disease of the mamma is most frequently met with in the form of tubercle. My experience, on the contrary, leads me to state, that for one case in which a distinct and well-defined tubercle exists, either in the glandular substance of the breast or connected with it, we shall meet with six or eight cases in which the whole mamma is affected. When the former state exists, the absorbent glands are longer of becoming contaminated, and an operation will prove more successful in completely eradicating the disease. Should extirpation be had recourse to it is the safest practice in all cases of carcinomatous tubercle to remove the whole breast; as, without this, there is a risk of its recurrence, owing to a number of these fibrous bands, so characteristic of this disease, penetrating deeply into the substance of the mamma."

We are disposed to think, with Dr. Macfarlane, that insulated tubercle is not the most frequent form of scirrhus as it attacks the mamma. But we are not so confident of its minor proportion of malignancy. His recommendation to extirpate the whole breast, no matter how small a part of it is involved, is supported by the practice of the most experienced surgeons. Dr. Macfarlane indeed entertains and expresses one or two opinions, which though evidently founded on attentive observation may yet be considered perhaps, somewhat fanciful. He believes, for example, that when there exists, in addition to the usual appearances of carcinoma, one or more cysts filled with bloody fluid, the disease is more actively malignant and seldom if ever eradicated by an operation.

Leaving scirrhus, and neglecting some cases, remarkable only for their uniformity, we conclude, without exhausting the subject of malignant diseases of the breast, by mentioning two instances of medullary sarcoma of the organ. This form of cancer is almost invariably more rapid in its progress, and more liable to be complicated with disease of other organs, than scirrhus is observed to be. It is not so frequent in the mamma as the latter, though other tissues, the testis for example, are constantly invaded by it.

CASE II.—*Medullary Sarcoma of the left Mamma, &c.—Wound and Ligatnre of the Axillary Vein.*

Mrs. B. æt. 49, admitted Sept. 12, 1831. The left mamma was enlarged to the size of a fist, and indurated at the base, but elastic and tuberose on the surface. It was freely moveable, and its upper half, which was the most prominent part, was covered by integuments of a purple colour, which were traversed by varicose veins. A tumour, possessing similar characters, and about the same size, occupied the left axilla, and was so firmly fixed as to admit of but limited motion. From this, acute pains darted along the arm, which, with the pain of the breast, prevented sleep. There was also considerable thickening of the soft parts under the middle of the left clavicle, producing a slight projection perceptible to the eye, but no defined tumor could be felt.—General health good.

When the disease was first observed, about two years before, at which time the catamenia had ceased, it was the size of a filbert; but did not increase much till six months ago, when the tumor began to form in the axilla.

"On the 20th the diseased parts were extirpated. The removal of the mamma was speedily accomplished; but considerable difficulty was experienced in detaching from the axilla the diseased mass, which was fully larger than the breast. It adhered intimately to the margins of the pectoralis major and latissimus dorsi muscles, to the fascia, to the plexus of nerves, and, for nearly two inches, to the axillary vein. Notwithstanding the utmost caution in separating the tumour, which, from the firmness and intimacy of the adhesions, had to be done with the knife, the axillary vein was unavoidably wounded, and profuse hemorrhage produced. I was averse to include the wounded vein in a ligature, or to thrust a large sponge into the wound, and retain it there till free suppuration was established. In adopting the former plan there was a risk that the inflammation produced by the ligature might extend along the vein to the heart, and prove fatal; at the same time I considered the latter practice, from what I had seen in another case in which it was adopted, to be uncertain in its effects, and incapable of arresting the hæmorrhage, unless the sponge were secured with a degree of tightness which would interfere with the circulation in the axilla, and be productive of both local and constitutional excitement. It appeared to me that the unfavourable symptoms, from the application of a ligature, might be avoided, by pinching up and tying the wounded part, without including the whole calibre of the vein. This was accordingly done, by transfixing with a tenaculum both sides of the wound in the vein, drawing it out, and passing a ligature around it.

The tumour was then separated from its remaining attachments, and completely removed."

The patient was in a state of syncope, but she recovered, the wound healed, and she was dismissed on the 11th of October. On making an examination of the tumors, they were both decisive specimens of medullary sarcoma. On the 8th of December, the woman died of serous apoplexy at her own house. The cicatrix could then be distinguished with difficulty from the sound skin. The parts in the axilla were condensed and matted together. The axillary vein was pervious, but its calibre was slightly diminished at the point to which the ligature had been applied. No vestige of the fungoid disease could be discovered.

Dr. Macfarlane owns that he was exceedingly averse to the performance of the operation, and was only induced to accede to it by the urgent entreaties of the patient. He says that he has seen several cases in which the diseased parts were amputated at a much earlier stage, and where there was but little, and in some instances no affection of the axillary glands; but the result was uniformly unfortunate. Our own experience perfectly accords with that of our author. Within the last three years we have enjoyed the opportunity of seeing two cases in which ulcerated medullary sarcoma of the breast was removed. In both the wound inflicted by the operation healed. But in one the patient died at the end of two months, with medullary tumors springing from the cranial diploë; and in the other, death ensued in the same time from medullary tumors in the lungs. Such is our experience of this most malignant affection.

CASE 12.—*Medullary Sarcoma extending from the Axilla to the Breast.*

M. S. æ. 39, married, admitted Feb. 3, 1832. The right axilla was filled with a hard, irregular, and flattened tumor, of an oblong shape, which was the seat of violent paroxysms of lancinating pain. The fingers could not be insinuated between its upper margin and the axillary vessels: it dipped under the edge of the pectoralis major and latissimus dorsi muscles, and admitted of but little motion. A thickened band was traced from its inferior border to the mamma, a small portion of which felt hard and painful. She slept ill, and complained of pain, numbness, and inability to move the right arm. The tongue was smooth, and of a dark red colour,—appetitite impaired,—bowels natural,—menstruation regular,—countenance sallow,—pulse seventy-two. The tumor in the axilla was first observed three years before, about twenty-one days after she was delivered of her second child. It was then the size of a field bean; but did not increase much, or become painful, till about five months ago.

The tumor seemed to be scirrhus. Our author was disposed to avoid an operation. But the patient was resolved on its performance, and it was performed. It was done on the 12th, the tumor, mamma, and intervening band of thickened substance being extirpated. One of the axillary nerves was deeply imbedded in the tumor, and was divided. On the 10th of March, the patient left the hospital improved in health.

The tumor presented, on dissection, the structure and appearance of medullary sarcoma. It was composed of three cysts; one of which contained a bloody fluid, and the others a soft, yellowish-white, brainy-looking substance, in which were small clots of blood. The inner surface of these cysts had a dark-red villous appearance, and was studded here and there with small spongy granulations, the encephaloid substance in immediate contact with these points being in a state of greater mollescence than in any other part of the tumor. The outer edge of the mamma was hypertrophied and indurated; and in the cellular substance, immediately exterior to it, two enlarged lympathic glands were found.

Dr. Macfarlane observes the difficulty of distinguishing between scirrhus and medullary sarcoma in this case, a difficulty sometimes felt. In the early stages of the latter much must depend on the quantum of compression to which the tumor is submitted. In general, medullary sarcoma is attended with less pain than scirrhus. This seems to depend in some degree on the greater degree of condensation of the latter. If the former is much straitened and confined by the pressure of fasciæ or of muscles, its texuture is rendered firmer, and not unfrequently the lancinating pain of scirrhus is experienced.

Dr. Macfarlane has not touched on an interesting point, the varieties of constitutional contamination observed in cases of scirrhus and medullary sarcoma. The affections of the lungs are perhaps the most frequent, and after them come malignant deposites in the liver. It would be interesting, if not important, to determine, by a careful calculation of cases, the periods at which diseases of other organs supervene, the organs most affected, and the ratio of frequency of their affections. Much time would be required, much experience necessary, to determine extensive facts of this kind, and perhaps we must trust more to isolated cases, and the common mass of common observation, than to any elaborate individual researches.

We had intended to include in the present report the subject, and many cases of tumors of the abdomen. But its length must compel us to defer the latter to another opportunity, when we shall endeavour to throw together some other facts, in addition to those brought forward by our author.

---

## ST. GEORGE'S HOSPITAL.

### REMARKABLE DISTORTION OF THE CERVICAL VERTEBRÆ, WITH CLINICAL REMARKS, BY MR. CÆSAR HAWKINS.

### *Scrofulous Caries and Tumor of the Spine.—Cure.*

Harriet Cumming, æt. 10, admitted April 9th, 1834, under the care of Mr. Hawkins, with partial pareplegia of all the extremities, so that she cannot grasp any thing in her hands, nor support her weight on the legs; neither can she direct either limb at once, and freely, to any particular spot, any movement being conducted slowly and with effort, and several attempts are often necessary before the particular action can be performed. The sensibility of the arms is also a little impaired. The head is scarcely capable of being moved at all, in any direction, being impeded by some displacement, and by a tumor around it; the circular motions of the head do not allow of the chin being rotated above two inches, and although she can bend the chin forward so as to touch the chest, she cannot bend it backwards at all; so that when it is as erect as she can make it, the chin is not above two inches from the sternum, and if she moves the head much, it is with the assistance of her hands. The chin is much more forwards, and much more depressed, than natural, and the occiput necessarily more on a level with the back of the neck and with the shoulders than it ought to be. The back of the neck, at the same time, presented a remarkable appearance; since, besides its being shortened and flattened by the approximation of the head to the shoulders, it was enlarged and widened by tumefaction, formed around the spine, which quite prevented the different vertebræ from being distinguished. This swelling was chiefly at the sides of the vertebræ, and partly round the spinous processes; but, as far as could be ascertained from examination in the front of the neck, it did not seem to be formed anterior to the bodies. This swelling was smooth and uniform, and, though elastic, was evidently composed of solid substance. There was no pain on pressure, neither did the movement of the neck seem to occasion any pain. Her health had throughout been good, and there seemed to be only a trifling febrile affection. Bowels open naturally—urine healthy—perfect control over the rectum and bladder.

*History.* The affection is attributed to a blow three years ago, her head having been struck against a ceiling; as far, however, as can be gathered from her mother's account, there may have been some partial loss of power over the upper extremities at the time, or soon after the accident; but she has been going about without pain or inconvenience till about three weeks ago, when she suddenly lost the power of standing, and regulating the movements of either limb. It would seem, too, as if, at that time, the left upper extremity was first partially paralized, then the right arm, next the right lower extremity, and lastly the left.

In investigating the case, Mr. Hawkins gave it as his opinion that the case was a complication of scrofulous caries of the bones of the spine, with a peculiar deposit of organized substance among the ligaments of the spine. With regard to the caries, the mode in which the destruction of the bones had taken place seemed to him to account for the peculiar deformity. The caries was usually in the *bodies* only of the vertebræ, so that the arches remaining entire, the loss by absorption in front occasioned a sinking in that situation, and, consequently, an angular curvature backwards in the spinous processes, which still remained attached to one another. In this case, however, the *articular processes* also had been destroyed, as well as the body of one, or perhaps of two veretebræ, so that the head, with the four upper vertebræ, has sunk altogether downwards and forwards, occasioning the remarkable circumstance of the chin being actually as low as the sternum, and, in some positions, touching the chest below the upper part of the sternum—while there was, at the same time much more of the head in front of the spine than there ought to be, the line of the lower vertebræ no longer corresponding with the foramen magnum, but with the back of the occiput. The spinal marrow was thus not merely bent, but must be to a certain extent, bent doubly, so as to describe a deviation from its proper course resembling the letter S, and yet without causing much paralysis. This circumstance, Mr. Hawkins observed, is sufficient to show that, in disease of the spine, it is not the pressure upon the spine, but the irritation propagated to the membranes and substance of the spinal marrow, which occasions the paralysis. A very great curvature may, therefore, allow a person to walk about firmly; and a case in which there is no curvature whatever may be attended with the most complete loss of power if there is inflammation close to the spinal marrow; and this girl, though paralysed now, may perhaps recover the use of her limbs, though the distortion will remain as great as ever.

For the same reasons, the muscular movements only of the extremities are usually impaired; because, the caries being confined to the bodies of the vertebræ, the irritation is propagated only to the anterior part of the spinal marrow, on which those movements depend, while the posterior part remains unaffected. In this case there is a little loss of sensibility, not, perhaps, from the posterior part of the spinal marrow being a little inflamed (though this is of course possible, when the caries affects the oblique processes as well as the bodies), but probably from the tumor around affecting the cervical nerves. I judge that this is the case, because the upper extremities only are partially deprived of sensibility, whereas, if this arose from an affection of the spinal marrow, it should of course be observed in the legs also, just as you observe it in injuries of the spinal marrow, along with the other fatal effects upon the parts below the injury, which arise from the loss of the important vital functions, which depend upon the influence of the posterior part of the spinal marrow.

The case before us, in which there is an entire absence of pain, will serve also to show the *scrofulous* nature of the caries, as distinguished from ulceration of the intervertebral substance in adults; there being, in these cases, exactly the same distinction that may be often observed, in the hip-joint, between the scrofulous affection of the head of the femur and the primary ulceration of the cartilages. The tumor formed round the vertebræ is of a peculiar nature, which I have seen in several instances, and which may occur independent of caries of the bones. I have seen it in a child, after a blister had been applied to the neck for irritation of the brain, occasioning complete stiffness of the neck, with partial paraplegia, and with the same flattening and widening of the neck as in this child. I have seen it also, however, in adults, following injury of the neck, where there was no reason to suppose that it was scrofulous matter, and where it disappeared under blisters. In fact, in this girl it appears to be more solid than scrofulous matter usually is; and in a preparation in the museum, you may see that, in a case where it followed exposure to cold, and was ultimately fatal, there is a deposit which is completely organised, which scrofulous deposit is not, and has filled every part around the spine, and passes in by the foramina into the vertebral canal, where it is situated all round the spinal marrow. In a young man in whom there was a swelling of this kind, the deposit seemed to be around the sides of the vertebræ only, and external to the spinal canal, and the upper extremities were paralyzed without any affection of the lower limbs; and the swelling was in great measure dispersed by repeated blisters, and the motion nearly restored to the arms. The indication, in this case, appears to be to check the caries, and procure absorption of the deposit around by blisters, and perhaps some benefit may be derived from mercurial ointment, as a dressing to the blister.

April 10th. *Empl. lyttæ nuchæ, et Ung. hydrarg. fort ulceri.*

12th. *Olei ricini*, ℥ss.

15th. *Rep. Ol. ricini.*

19th. *Rep. Empl. lyttæ, et Ung. hyd. fort.*

22d. Has a little more power over the limbs. Swelling rather lessened.

24th. *Haust. rhei.*

26th. *Repr. Empl. lettæ, et Uung. hydrarg.*

28th. ℞. *Calomel*, gr. iij. *Pulv. rhei*, ℈j. *statim.*

May 4th. *Rep. Empl. lyttæ, et Ung. hydrarg.*

13th. More power over the limbs; she is able to stand and support her weight, and to move a little without other assistance than a table or the bed. The swelling, though still considerable, is firmer, and more divided into several portions. Health improved, so that she had gained flesh since her admission. Allowed to sit up in a chair.

20th. *Repr. Empl. lyttæ, et Ung. hydrarg.*

24th. Can walk slowly and feebly indeed, but without holding by any thing.

June 3d. *Repr. Empl. lyttæ, et Ung.*

21st. Discharged as cured, being now able to grasp firmly, and to walk tolerably firmly and quickly. She can raise her head much more, though she is unable to bend it backwards; she can also rotate the head considerably more, and is not now afraid to do so quickly. The appearance of the deformity is very striking from the chin, when the head is much raised, being so much before the sternum, and nearly on a level with it.

Dec. 1834. This girl has frequently been to the hospital to shew herself to Mr. Hawkins, and she has remained quite free from any complaint, with tolerable freedom of motion in the neck, except backwards, in consequence of the distance between the points of the spinous processes of the fourth and fifth vertebræ from each other, the upper one necessarily impeding the backward movement of the head, though allowing of motion in every other direction.

---

## LIVERPOOL OPTHALMIC INFIRMARY.

### REPORT OF THE PRACTICE FOR THE YEAR 1834.

This Report is contained in a lean octavo volume, published by Hugh Neill, surgeon to the charity. This gentleman's enthusiasm in the cause of ophthalmic surgery appears to be of no common order. He quotes, and he quotes with rapture, the boast of M. Bourgot St. Hilaire, that he, M. St. Hilaire, was a surgeon-ophthalmologist, or what is profanely denominated an eye doctor. What can be more noble, what can be more French, than the opthalmologist's apostrophe.

"Naturaliste aux écoles publiques, au Muséum, je me ferai gloire de rester aux yeux du corps médical, médecin et chirurgien ophthalmologiste!"

But, as Mr. Neill says, enough of this. When we descend from the elevated style of the preface to the sober groundwork of the report, we find comparatively little to detain us. Yet the report is spread through fifty-five pages, and more might have been given, both of interest and instruction, by one as much devoted to opthalmic surgery as Mr. Neill would appear to be. The subject which attracts most of the attention of our author, and which occupies the greatest space in the report is the use of strychnine in amaurosis. Our readers must be aware that this formidable remedy has been highly vaunted in this formidable disease, and that many have found, or have said they found it almost a specific. There is no profession, nor any portion of human learning in which experience teaches us more sadly to doubt and disbelieve what is said and what is written, than it does in our's. The success that we read of we seldom see, and the critic has constantly occasion to remark, that means precisely opposite succeed in the hands of different individuals, to the exclusion of every method but their own. If men do not lie, truth is contradictory, and in order to believe we are too often called on to evince much charity and little judgment. We will not say that scepticism, we are talking of our science only, we will not say that scepticism is generally to be recommended, but the rational philosophical spirit of doubt must be entertained by every man of sense. Enthusiasm perverts as much as knavery, nay, it is more dangerous, because it is received with less suspicion of dishonesty. In medicine there is at least as much room for self-delusion as for voluntary fraud, and who has not observed in his professional walk, the innocent impostor, convincing himself and striving to persuade others, that facts are all in favour of his visionary perhaps ridiculous opinions. But we drop this train of general remark, excited by the connexion of strychnine and amaurosis, and proceed to Mr. Neill's observations.

### AMAUROSIS.

"My practice," he says, "has been general. I have cupped, purged, and depleted where plethora was evinced. I have stimulated where there was atony; and where general debility has shown itself, I have not been deficient in the exhibition of my tonics. Mercurials, too, have had their fair trial; but I have not *yet* found a *panacea*.

If any one remedy has stood my friend more than another, it has been *Strychnine* judiciously administered, combined, or not, as necessity pointed out, with one or other of the general forms of treatment already alluded to.

Surgical assistance, in some cases, is unfortunately of no avail; but in the early stages of the complaint, the skilful practitioner may, and *can*, do much to protract, if not to prevent, its progress; and the disease, if not cured, may be made to linger on its way."

This is not injudicious. Mr. Neill does not vaunt the drug too highly. He observes in continuation:—

"In no instance have I seen Strychnine useful in Amaurosis, if internally administered; nor in any have I seen it successfully used where the *Iris* had completely lost its motion. In many cases also, where I have used it with advantage, no twitchings were perceived by the patient; but just about the time that sight began to improve, a very considerable sensation of bitterness was communicated to the palate, a few hours after each application of the remedy.

It is also but justice to acknowledge, that I have often been disappointed in the use of Strychnine, in cases where I had looked for the happiest results."

Mr. Neill quotes seven cases from a paper which he published in the second number of the Liverpool Medical Journal. That paper was noticed in several other journals, and we need not therefore resuscitate its contents. But a new case is added to those before published, and this one we will introduce. It is an instance of paralysis of the rectus superior oculi. We will give it in our author's words.

"I was lately consulted by a young and lovely lady, who for six years had been afflicted with symptoms which rendered her existence almost miserable. About six years ago, she had suffered from severe rheumatic fever, and was for many weeks confined to a sick bed. Upon her recovery, it was discovered that the superior straight muscle of the right eyeball had lost its power. Headach followed the rheumatic attack; these headachs became more and more frequent—the lids began to fall—sight became diminished, with slight outward squint. Medical men after medical men were consulted, but the ailment became more troublesome. Several of the Metropolitan opinions were taken, and their advice pursued, but with no advantage.

I found her seated with the lips drooping. If she wished to raise her eyes as far as my face, her chin was required to be thrown up, until the effort and effect were most painful. The right eye had lost its brilliancy; it was dull and muddy looking. She complained of great weight over the brows, and of general debility; and expressed her determination to endure any pain or uneasiness, provided the slightest hope could be held out of even partial recovery.

I proposed the use of Strychnine, by blister to the temple, and immediately commenced its application.

A small *horse-shoe* blister was applied over the right brow, at night; and on the following morning the one-fourth of a grain of Strychnine was dusted over the denuded surface. On the following morning, half-a-grain. Next morning, the same quantity. Fourth morning, a grain. On the evening of this day, the lady said that 'she thought, when she looked at a printed page, the type and paper were brighter than they had been.' Fifth morning, a grain. She is certain, this evening, 'that *there is* improvement.' Her spirits are high —no twitchings—tongue clean.

On the seventh day, a grain is applied morning and evening. She slept badly, started much during the *night*.

On the eighth morning, one grain and a half is applied. About five o'clock, P. M. she was seized with difficulty of breathing—general languor—cold feet —her face was flushed. She had hot bottles to the feet, and stimulants; this difficulty of breathing wore off about eleven o'clock at night—she slept well.

Ninth morning, the lids are *well up* —the eye's motions restored—it rolls rapidly in every direction, so far that the cornea is raised at its lower edge above the edge of the lower lid.

There is, however, unequal motion when the two eyes act at the same time. I continued the Strychnine for five days longer, in the quantity of one grain every morning, and the improvement gradually progressed. Fourteen grains in all of Strychnine were applied.

I now commenced the use of tonics, with small doses of blue-pill; one grain each night. The sound eye is bound up, and the (formerly) bad one is obliged to do all the work; it is *bright, lively, and sparkling*, but has not obtained complete motion upwards.*

The two eyes are parallel until they catch the cornice of the ceiling. But upon a sudden exertion, or in straining the eye much upwards, there still is to be perceived a slight want of parallelism. However, I am not without hopes that this imperfection will yet be overcome.

All dropping of the lids, all imperfect sight, and general uneasiness, from a sense of weight over the forehead and brows, are gone.

I must not omit mentioning, that when I first saw the lady, the pupil was dilated and the iris sluggish; indeed motion was almost lost. But after the fourth application of the Strychnine, it gained the most lively motion."

It cannot be concealed that the report, if considered final, is somewhat premature. Three weeks only have elapsed since the last application of the strychnine. Yet with this slight drawback, the case deserves attention.

Dr. Ryan and Mr. Neill have found strychnine useful in some instances of deafness. Yet the fact on which Mr. Neill founds his faith is but a lame one.

*Case.* "Mrs. H., aged 50, after the birth of her first child, was seized with deafness in both ears. She has never had inflammation in, nor discharge from them. This deafness has now constantly existed for thirty years, and is so complete as to require the continued use of a trumpet. She says that sounds are *heard* with one ear, but are *perceived* with the other. *One* hears the sound, the *other* distinguishes (internally) what that sound is. She consented, on the 14th April last, to have a blister applied behind the right ear, and on the following morning I commenced the use of strychnine, by applying half a grain daily over the blistered surface. This was continued for three days, when the quantity was increased to one grain. On the fifth day, she heard *distinctly* without her trumpet, which she laid aside; on the sixth day, sounds the most minute were distinctly heard, and sharp sounds were extremely painful; on the evening of this day, she complained of lowness of spirits; she did not sleep at night. On the seventh day, she frequently burst into tears, although she could not say from what cause. The strychnine was discontinued. For four days longer her hearing was retained. As the nervous agitation decreased, her deafness returned, and on the fourteenth day from the commencement her deafness was as complete as before.

---

* "The reader will understand what I mean by 'complete motion,' when I mention the fact of this lady being now able to exercise her eye, and improve her bodily health, by daily amusement at the billiard table."

I waited a week, and again applied a blister behind the left ear, and commenced the use of strychnine as in the former instance. The same effects were exhibited until the sixth day, when I speedily resigned the use of the remedy, from the patient complaining of numbness and dragging in one leg. Her deafness returned in a few days. She can now, as formerly, only distinguish the sounds of the voice by having her trumpet held in proximity to the speaker."

### CATARACT.

Experience is dogmatical, and so, being experienced, is Mr. Neill. He thus decides his, the best, operation for cataract.

"My operation is the needle operation, and my reasons are—

1st. For *Congenital* Cataract, no man should use any other instrument than a needle.

2d. For *soft* Cataract, it would be unsurgical to attempt any other than a needle operation.

3d. For *Capsular* Cataract, when the lens has ceased to exist, or is softened in texture, the needle is the best instrument.

And lastly. For *hard* Cataract, the *reclination* operation by the NEEDLE is surgical, elegant, least painful, and less likely to be injurious than any other operation.

You should not extract a Congenital Cataract; you should not *attempt* to extract a *soft* one; and you *need* not extract a hard Cataract.

### CONTUSIONS AND WOUNDS OF THE EYE.

Mr. Neill remarks that, in these injuries, prevention of inflammation is the paramount object. "I may contrast," he says, "several cases. One was a fine young woman, from Cheshire, who came to me with general suppuration of the eye-ball, resulting from a slight scratch of a thorn on the cornea; her eye was lost from want of timely aid. I may contrast this with two other instances, where injury more severe occurred, and yet sight was not affected. One had a penknife run through the cornea, and the protruding portion of iris was strangulated for two hours before I returned it; the other, the eye-ball was transfixed with a fork; and yet in neither of these cases was sight injured. But I could repeat a multiplicity of cases in proof of this point. There is such a difference in general surgery. You there look for reaction as a healthy process; and when it comes, you temper it. In the EYE, however, you ought to dread, and should prevent reaction. Inflammation, long before it gives notice by PAIN, has done irreparable injury to the non-sensitive and delicate structure of the INNER eye."

Mr. Neill dwells long on the reputed sensibility of the surface of the eye. That sensibility he thinks, with Mr. Guthrie, greatly over-rated. Yet he differs from Mr. G., in not granting, as the latter does, an equal amount to the lid and eye-ball.

"I grant," he says, "that if dust lie gently on the lining membrane of the lid, it will not produce pain; but if you press it upon that membrane, very acute pain will instantly be produced, accompanied by lacrymation, and distended vessels; showing a sympathetic and easily excited sensibility in the contiguous texture. But you may press a body, rough and sharp, against the eyeball, without much uneasiness; and further—you may, as I do every day, touch the corneal or sclerotical conjunctiva with the solid nitrate of silver, and the patient does not exclaim that he suffers pain, *until* the lids are allowed to glide over the injured surface, and THEN, how acute it is! But touch the *lining membrane* of the LIDS with nitrate of silver, and pain is the immediate result!

Hence I infer that that sensibility to pain which has usually of late been attributed to the eyeball, alone pertains to the lid.—Observe, I speak of the eye-ball in health; for when inflammation has attacked the compact texture of the tunics, we all know how sensitive they become.

The conjunctiva of the eyeball is comparatively insensible: it is braced on the ball tight as a drum head. Draw the skin tight over a healthy finger, and you may prick it, but pain is scarcely perceived."

We cannot exactly agree with Mr. Neill that the conjunctiva is stretched upon the eye-ball as tight as a drum-head. The conjunctiva covering the sclerotica is loose, and *if* conjunctiva does cover the cornea, it is at least much modified in structure. Under any circumstances it is the acmé of absurdity to suppose that it is stretched so tight, as by the strangulation of its vessels, to be insensible to pain. The idea is quite preposterous.

Mr. Neill is an advocate for belladonna, even during the inflammatory condition of the eye, when the result of injury. He applies the extract over the upper lid and brow.

### PUSTULES OF THE CORNEA.

"Pustules of the Cornea constitute a dangerous complaint.

There is generally febrile excitement, full pulse, foul or unnaturally red tongue, redly inflamed inferior palpebral conjunctiva, and, in young persons, a round drum-sounding belly.

I purge, bleed by leechings or small cuppings, sicken by the tartarised antimony. Give Dover's Powder at night, use fomentations of poppy heads, and when the irritation marked by intolerance of light subsides, I use the weak solution of nitrate of silver. I recommend the patient to drink water impregnated with carbonate of soda, and finish off with alternate doses of blue-pill.

This complaint sometimes leaves permanent specks. If the pustule occur in early life, I generally commence my treatment by applying the two grain drop of the nitrate of silver, and give half-grain doses of calomel every night, with antacids."

### STRUMOUS CORNEITIS.

"This is a very teasing complaint. In the first instance, it is necessary to examine the upper lid; perhaps you may find the vascularity of the Cornea produced by tubercular granulations on the lining membrane of the lid, which mechanically keep up constant irritation. If so, they must be touched with sulphate of copper or nitrate of silver, and the complaint, by mild treatment, will be overcome.

If the vascularity exist without this irritation, foment, give blue pill, and from time to time apply Mr. Guthrie's ten grain ointment. The *Proto-iod. Hyd.* is, as far as I can judge, a very uncertain remedy; it is a bad and inefficient substitute for either calomel or blue-pill."

Mr. Neill quotes a case of this disease to illustrate the treatment.

*Case.* Margaret Porter, aged 14, from Ormskirk, was admitted an in-patient on the 29th March, 1834.

She had been unable to bear the slightest light for three months. On examining the eye, the Cornea has a bright red appearance, the pupil is not to be seen. Ordered fomentations of poppy heads, three grains of blue-pill night and morning.

April 8th. Pain and intolerance of light gone. The eye can be easily examined, and the Cornea is quite a network of twisted red vessels. Apply Guthrie's *ten grains Nitrate of Silver* ointment, and continue the blue pill at night. The ointment to be repeated twice every week.

May 4th. Made out-patient.

July 8th. No vestige of disease remaining."

### FISTULA LACHRYMALIS.

The only observation on this affection worth quoting refers to a catgut probe of our ophthalmologist's construction. "If there be," he says, "disease of the *os unguis*, as often happens, puffiness will exist around the mouth of the wound, and unhealthy granulations *within* it. In such cases, I use a catgut stilette; it is light, and does not hurt the diseased parts. The catgut swells gradually, and enlarges the opening without producing pain. In fact, under peculiar circumstances, it is an excellent little instrument. One thing, however, must be remembered—it must on no account remain longer than twenty-four hours in the passage. Any surgeon may make it in the following manner:—Cut about an inch of cat-gut bougie; file down one end; give it roundness, and a little tapering; then polish it with sand-paper. To give it a head, hold the cut end to a candle, it will swell, and a little heated black sealing-wax will then give it a famous head. Before the instrument is used, it should be dipped in oil."

We really see nothing else in this hungry volume to detain us. It is a good illustration of the old adage—"much cry and little wool."

---

## CLINICAL LECTURES ON HÆMORRHOIDS.*

### By Sir B. C. BRODIE, Bart.

The opinions of Sir Benjamin Brodie on points connected with the practice of surgery, are anxiously sought, and, of course, are highly appreciated by the profession. His accuracy of observation, extensive opportunities, and judicious improvements on ordinary treatment, give a value to his lectures on familiar subjects of which they might scarcely be supposed susceptible. It might appear that the history and treatment of hæmorrhoids were sufficiently exhausted. But experience distinguishes many circumstances that have either been imperfectly noticed before, or, if noticed, imperfectly described. And this it is which makes the observations of a practical man, in a science such as our's, more useful to the student than the elaborate information collected by professed authors from every possible source.

Sir Benjamin occupies two clinical lectures with the common disease—hæmorrhoids or piles. Of these lectures we shall present the principal portion. The closely-woven tissue of Sir Benjamin's style of lecturing and writing usually precludes much useful abbreviation.

The distinction of external and internal piles, and the nature of the hæmorrhoidal swelling, first occupy the attention of the lecturer. The former we think we may omit; of the latter we need only say that Sir Benjamin cannot doubt that piles are in the first instance dilated varicose veins. Dissection fully appears to prove this. Here, as in other cases, surgeons have forgotten that, to ascertain the real nature of any organic alteration, the examination should be made at an early period; when this has become advanced, other changes supervene to modify and obscure the first.

"Those ultimate changes," Sir Benjamin remarks, "which take place in cases of piles, are exactly similar to those which occur in connexion with varicose veins of the leg. You know that at first the veins of the leg are simply varicose, or dilated; that at last they become inflamed; that lymph is deposited in the cellular membrane surrounding them, and that at last there is a great mass of induration, in which the diseased blood-vessels are, as it were, imbedded. So it is with the veins of the anus and rectum. At first they become simply dilated; repeated attacks of inflammation cause an effusion of lymph into the adjacent cellular texture, and then the pile appears like a solid tumor; in the centre of which, however, you still find the dilated vein in which the disease originated."

---

* Med. Gaz. Feb. 21, and Mar. 24, 1835.

Sir Benjamin observes by way of parenthesis, that though internal and external piles deserve separate consideration, they are in fact affections of the same veins; the action of the spinchter preventing dilatation in the intermediate points. The causes of piles are multifarious, though probably all act in the same immediate manner, by preventing the proper return of blood from the inferior mesenteric vein. Diseased liver, tumors of the abdomen, pregnancy, costiveness are all familiar agents in producing hæmorrhoids.

"Piles are more frequent in the upper classes of society than in the lower. You know that in hospital practtice you see comparatively few cases of piles, but out of it, I must say they form a very large proportion of the cases that come under my care. The reason of this difference is to be found in the different mode of life in the various classes of society. The better classes take but little exercise, and they are more liable to constipated bowels than the lower classes, who take much exercise and live a great deal in the open air. There is a notion that those who take aloetic purgatives are more liable to piles than others: but I must acknowledge that I am not quite satisfied of the fact. I have a respect for all popular notions, believing that there is in general some truth at the bottom; and I will not say, as every body thinks so, that aloes will not make people liable to piles, but I am sure they do not produce that effect to the extent that is supposed; and I could not be certain, from my own observation, that they are productive of it at all. The fact is, that those who are habitually taking aloetic purgatives are persons with costive bowels, who, as I have already mentioned, are just the indiduals most liable to this disease."

The symptoms of internal and of external hæmorrhoids are different, and they also vary with the stage of the disease. Itching is an early and a well-known symptom; occasional attacks of inflammation both of internal and external piles are also commonly known to take place. Every now and then, says Sir Benjamin, when the patient is costive, the external piles become swollen and tender; the internal piles become swollen also, so as to fill up the cavity of the gut, thus exciting a sensation as though a stick, or some other foreign body, were lodged in it. The external piles sometimes inflame, swell, and become tender, so that the patient can scarcely bear them to be touched, and cannot walk without difficulty. They may continue thus inflamed for some considerable time, and then the inflammation may subside; the piles generally returning to the condition in which they were before the attack of inflammation came on, but not always.

Sometimes an abscess forms in one of these inflamed external piles, and bursts externally. The abscess may be troublesome to heal, but when it is healed it is found that the cavity of the vein is obliterated, and that it is, in fact, cured.

"Such an abscess, as I have just mentioned," he proceeds, "must be distinguished from a *fistula in ano*: from which, indeed, it is essentially different, as I shall explain more fully hereafter. Sometimes, when an external pile is inflamed, the blood in it becomes coagulated, and it is then hard to the touch. If under these circumstances you slit open the pile with a lancet, there comes out a mass of hard coagulum, perhaps as large as a pea or a horse-bean; the cavity inflames, suppurates, and granulates; the same thing happens as though suppuration had taken place in the first instance, and the pile is obliterated. But if you do not slit open the pile, and leave the disease to take its own course, the cavity being blocked up by the coagulum, the vein becomes obliterated, after which the coagulum is gradually absorbed, and the pile is cured; that which was a pile before being now converted into a flap of skin. Just the same circumstance happens with varicose veins of the leg, where sometimes there is a natural cure, in consequence of the coagulation of blood in the dilated vessels. Sometimes, when a pile is thus distended with coagulated blood, the skin becomes so much attenuated that it gives way in some one point, and the blood being gradually squeezed out, suppuration probably takes place; and the case proceeds just the same as if you had opened the pile with a lancet. It is very common for external piles to undergo a process of natural cure in one or other of the ways which I have now described; and by examining the parts, you may ascertain whether these changes have taken place, as every one of them, after the cure is effected, becomes at last converted into a fold or flap of skin. Thus, if you see a patient with three or four loose folds of skin at the margin of the anus, you may know that these were formerly piles At first these folds of skin are large, loose, and pendulous, but gradually they become contracted, till at last they give no sort of inconvenience to the patient."

Sometimes internal piles are so much distended, that the gut is incapable of containing them. They are then pushed out through the anus and form a tumor, which projects externally, although still covered by the mucous membrane. The protrusion of internal piles gives rise to many observations from the lecturer. When large, they always protrude when the patient goes to the water-closet, and afterwards go up spontaneously. If they be larger still, after going to the water-closet they will not return spontaneously, but the patient is under the necessity of pushing them back with his hand. If they be larger still, they come down at other times, especially when the patient is walking, so that he cannot well take any exercise. Sometimes we see one small internal pile permanently protruded, forming a red vascular tumor of the size of the extremity of the little finger. This is painful, and otherwise very troublesome, to the patient, by keeping up a great and constant discharge of mucus. Sometimes there is a large protrusion of internal piles for several days, then they gradually become reduced in size, and go back into their proper place above the sphincter muscle. In short, with respect to the protrusion of internal piles, there are all possible varieties of circumstances: they may protrude occasionally, for a short time, or for a long period; they may be constantly protruded; or there may be a large protrusion at one time, and a small constant protrusion besides. Whenever the protrusion, be it large or small, takes place, there is an abundant secretion of mucus from the rectum; the piles themselves are sore to the touch; the surface is red and vascular; and if you put your hand upon them, you find that you can diminish their size by pressure, but the moment you take off the pressure, they are as large as ever. Sir Benjamin is careful to discriminate this state from that of true prolapsus of the rectum, with which, however, it is constantly confounded. In the latter the gut itself comes down, perhaps to the extent of several inches. But when internal hæmorrhoids protrude, that portion only of the mucous membrane which covers them descends; as, indeed, it necessarily must. The distinction between the cases is important, and should not be lost sight of, as it is.

Internal piles in this condition produce great inconvenience. Sometimes by irritating the contiguous parts they occasion frequent desire to make water, or even actual retention of urine. They may also bleed freely, whence their name of hæmorrhoids. The blood that flows is usually arterial, and the disposition to hæmorrhage is in the latter stage of the disease, when an increased determination of blood takes place to the mucous membrane and cellular tissue by which the piles are surrounded. The amount of hæmorrhage varies from a mere tinge, to the loss of six or eight ounces daily. When such quantities are voided the usual results of long continued bleeding may ensue.

"Inflammation sometimes takes place in internal piles, and ends in suppuration. The patient complains of a little discharge of matter from the anus, and you find, in addition to the mucus, that there is a little yellow stain of pus on his linen; and at first you would suppose there was a common abscess about the rectum, such as produces a *fistula in ano*. But if you introduce your finfiger into the rectum, you feel a small orifice in one of the internal piles, and if you pass a probe with a light hand, it goes to the bottom of the abscess, which is perhaps a quarter of an inch in depth, or thereabout. The parietes of the abscess, however, are very thin and weak, easily broken down, and if the probe be not lightly introduced, it will run through them into the loose cellular texture external to the mucous membrane. The cellular texture also is very loose and yielding, offering scarcely any resistance to the probe, so that it will run in every direction; and hence it is that I have sometimes known a small abscess or an internal pile to have been mistaken for a very long sinus. You ought to be very careful not to fall into this error, which you might easily do—nay, in all probability would do—in the first case of the kind that occurred to you, if I did not give you this caution."

Sir Benjamin Brodie has already described the natural cure of external piles — inflammation — consoldation—and subsequent absorption of the lymph. There is a natural cure of internal piles also, mortification.

"Where piles of a large size protrude, completely filling up the orifice of the anus, the sphincter muscle is contracted upon them like a ligature, and causes them to become more swollen than when they were first protruded; just as a ligature on the arm makes the veins of the fore-arm and hand turgid previously to venesection. But the piles may be larger still; the sphincter muscle may contract more powerfully upon them; and then the pressure not only interferes with the return of the venous blood from the pile, but prevents the entrance of arterial blood into it. It acts as a ligature acts in a surgical operation—on a polypus of the uterus, for example. There is not a sufficient circulation in the protruded piles for them to retain their vitality; mortification takes place, sloughing follows, and thus the piles are destroyed. I have known several cases cured in this manner, and there is little or no danger in the process. I have sometimes known medical men to be alarmed at a case of this kind, confounding it with those of mortification from other causes; but the alarm is without foundation. The late Dr. Pearson, who was for a very long period of time physician to this hospital, was the physician and friend of the celebrated Mr. Horne Tooke. Many years ago I was dining with Dr. Pearson, and after dinner he gave an account of Horne Tooke's illness. He said that he had long laboured under piles; that at last mortification had taken place; that there was no chance of his recovery; and he added that he had that morning seen him for the last time. I remember that in the middle of this history there came a knock at the door, on which Dr. Pearson said, 'Here is a messenger with an account of my poor friend's death.' However, it was some other message; but by and by a messenger did arrive, saying that Horne Tooke was much the same, or a little better. It turned out, as I have been informed, that the piles sloughed off, and that from this time he never had any bad symptom. In fact he was, if I have been rightly informed, cured of a disease which had been the misery of his life for many years preceding, and he lived for some years afterwards.

Sir Benjamin Brodie proceeds to the treatment, independent of an operation, before he touches on the mode of operating.

In the early stage mild aperients, especially the electuary of senna, sulphur, and mel rosæ—moderate exercise and diet—lavements of cold water, or water made more astringent with alum, or with the tinctura ferri muriatis, or lime water—such are the familiar items of treatment which most practitioners commonly employ. Sir Benjamin is a zealous advocate of the celebrated Ward's paste. He has often found it highly serviceable, gentle and occasional aperients being combined with it. A piece of the size of a nutmeg should be taken thrice daily, and it ought to be persevered in for two, three, or four months consecutively.

"How (asks Sir Benjamin) does the Ward's paste operate?' I know a case in which a patient, labouring under stricture of the rectum, had indiscreetly taken an immense quantity of Ward's paste, and in which the colon was found quite full of it after death. It is evident, that, except any small portion which may be digested, the Ward's paste passes into the colon, and that it must become blended with the fæces; and I suspect that thus coming in contact with the piles, it acts upon them as a local application; much as *vinum opii* would act upon the vessels of the conjunctiva in chronic ophthalmia.

In confirmation of this view of the *modus operandi* of Ward's paste, I may mention an observation of the late Sir Everard Home. He had a patient labouring unher piles, and he recommended him to take Ward's paste. The patient, little thinking that something put into the stomach was to cure disease in the rectum, crammed as much as he could bear of it up the rectum. I dare say it gave him a great deal of inconvenience, but as Sir Everard Home reported, it cured him; and Sir Everard said that since then he had used it as a local application in some other cases, with manifest advantage."

Sir Benjamin has also given with advantage a scruple of the cubebs pepper thrice daily. In some cases, too, he says, where there is a great deal of irritation the patient will derive benefit from copaiva combined with caustic alkali; half a drachm of balsam of copaiva, with fifteen drops of *liquor potassæ*, may be rubbed down with two or three drachms of mucilage and cinnamon water, and taken three times a day. This answers a very good purpose, soothing the piles, and keeping the bowels gently open at the same time.

If called to the patient when the external piles are inflamed and swollen, the surgeon should enjoin rest in the horizontal posture, and apply some leeches in the neighbourhood. If placed upon the piles themselves, the leech-bites are disposed to fester. If the piles are much distened, they may be punctured with a needle, which affords immediate relief, and does not give rise to festering. The piles should be punctured in several places, and a piece of rag wetted with some cooling lotion should be constantly kept upon the part. The patient should also take same cooling aperient.

"When internal piles are inflamed, swollen, and protruded, you should try first of all to push them back into the gut. Take a cambric handkerchief, or a soft old linen rag, squeeze out the blood from the piles, and, if you can return them into the bowel, it is so much the better; it will relieve the patient very considerably. But if you cannot push them up, or if when pushed up they immediately come down again, you should then keep the parts wet with a rag bathed with a cooling lotion, let the patient remain in the horizontal posture, and keep the bowels gently open, without purging. Here also, as in the case of external piles, the patient will derive much benefit from acupuncture in several places. Punctures made with a needle, neither on this or any other occasion, so far as I know, occasion inflammation or any other inconvenience; they evacuate the blood, relieve the tension and swelling, and do a great deal of good without any harm."

The second lecture, for we now quit the first, is dedicated to the description of the operation required for piles, and to a notice of prolapsus of the rectum, and of excrescences of the gut.

### OPERATION.

Sir Benjamin alludes to the discrepancy of opinion that has existed on the adoption of the ligature or excision for internal piles. Formerly very able surgeons for example Mr. Cline, removed internal piles by excision. But so many instances have been recorded of dangerous, nay, even of fatal hæmorrhage, in consequence of this proceeding, that most surgeons have been frightened into operating with the ligature. Sir B. Brodie explains the sentiments and follows the practice of Sir Everâld Home, both of which he was taught when a student in the hospital. Those sentiments of Sir Everard's are thus laid down :—That external piles which are covered by the skin ought not to be removed by ligature ; if they are removed at all, it ought to be by excision. On the other hand, internal piles which are covered by the mucous membranes, ought, *for the most part* to be removed by ligature. In short, the ligature is applicable generally in cases of internal piles, and excision of those which are external. The grounds of this distinctian are as follow : The application of a ligature to external piles gives the patient extraordinary pain at the time, and afterwards excites much inflammation, swelling, and disturbance of the general system ; whereas, if they be removed by excision, these ill consequences are avoided. After the excision of *external* piles there can be no danger of hæmorrhage, because the parts are entirely within your reach, so that the bleeding vessels can be easily secured ; and though some little inflammation may supervene on the operation, yet it is not sufficient to be of any real consequence. If, however, you remove large *internal* piles by excision, there may be copious and even dangerous hæmorrhage, since the parts which bleed are out of reach, above the sphincter muscle, where you cannot expose the cut surface, so as to be enabled to take up the bleeding vessel. On the other hand, the application of a ligature to internal piles in general causes but little pain, and only a slight degree of inflammation follows, for the mucous membrane has nothing like the sensibility of the skin, and does not resent an injury in the same manner. With respect to internal piles, then there is no objection to the use of the ligature, while there is the greatest objection to their simple excision. Sir Benjamin, then Mr. Brodie, was at one time seduced by Mr. Cline's recommendation, and removed internal piles by excision. In the first one or two cases, he found no inconvenience arise from his altered practice ; but then a case occurred in which the patient lost a great deal of blood ; in another case, the hæmorrhage was so great that the patient nearly died ; and then a third case occurred, in which also the patient lost an enormous quantity of blood, and he now wonders that he did not actually die. Since that time, Sir Benjamin has never removed large internal piles except by ligature.

"The removal of external piles is very seldom necessary : they are generally complicated with internal piles ; and if you cure the former, the latter, which are a continuation of the same veins, will be cured also. However, there are cases in which it is right to remove external piles by incision. For example, where they are enlarged and inflamed, so that it will take a great deal of time to subdue the inflammation, and the patient is all the while suffering pain, he may be relieved at once by two or three snips of curved knife-edged scissors. Or if an abscess has formed in an external pile, which bursts, discharges, and closes at the orifice, then bursts and discharges again, it may be worth while to cut off the pile and the abscess with it."

To remove an external pile, then, it may be seized with a double tenaculum, and snipped off by means of the curved knife-edged scissors. If an artery bleeds sufficiently to require a ligature, it should be tied. The following is Sir Benjamin Brodie's mode of operating for internal piles.

"I have said that internal piles are to be removed principally by ligature. You will observe I do not say they are *never* to be removed otherwise. The fact is, that when internal piles are small, it is not worth while to tie them ; and they may under these circumstances be excised with perfect safety. Such a case as this will frequently occur :—A patient complains of symptoms of internal piles ; he has always pain about the anus, and a discharge of mucus. You examine the parts, and find a pile, not larger than the end of your little finger, covered with the mucous membrane of the bowel, protruded, and, as it were, sticking in the orifice of the anus. You take hold of it with a double tenaculum, apply the scissors to the base, and no kind of inconvenience follows the operation. But whenever there are large internal piles, which protrude either constantly or occasionally, you ought not to venture to remove them except by ligature. In performing the operation by ligature, the first thing is to get the piles well protruded. For this purpose, you may make the patient sit over a pan of hot water, which will relax the sphincter muscle, and at the same time cause the veins of the rectum to become filled with blood. If this be not sufficient, let the patient have a pint or two of warm water thrown up as an enema; and when that comes away, the piles will probably descend with it. The piles having been by these means brought properly into view, you may let the patient lean over a table, or lie on one side in bed, with his knees drawn up, the nates being held apart by an assistant. each separate pile must be separately tied. If the pile be of a very small size, you may just take it up with a double tenaculum, draw it out, and tie a ligature round its base. But if the piles be of a large size, you should proceed in the following manner: have a large curved needle, armed with a strong double ligature; pass the needle, carrying the ligature after it, through the base of one of the piles, and then cut off the needle. The double ligature is now divided into two single ligatures, which are tied round the base of the pile, one on one side and the other on the other side, with a single knot. Treat all the piles in this manner; and as the ligatures are applied, let your assistant draw the several threads out of your way, holding them over the nates. When each of the piles is secured in this manner (and there may be two, three, four, or five, to be thus treated), you then proceed to another step of the operation: cut off the convex portion of each pile, so as to make an opening into the cavity of the convoluted vein which forms it. Thus you take off the tension produced in the pile by the blood which it contains, and are enabled to draw the ligature tighter than before. It should be drawn as tight as possible. As the ligature is tighter, so there is less pain afterwards; so also the slough separates sooner, and the more expeditious is the cure. You have now only to complete the double knot upon each of the ligatures, and cut off the threads close to the knots, returning the piles, ligatures, and all into the rectum. It is a very simple operation; and, except when the piles are in a state of inflammation, attended with but little suffering. You are to take care, in performing it, to keep all the ligatures clear of the external parts; for if they include any of the skin, the patient suffers a great deal of pain, and much inflammation will supervene. I generally give a pretty active dose of rhubarb the day before the operation, so that the bowels may be well emptied, and that the patient may afford to go for two or three days after the operation without having an evacuation."

The ligature-threads generally separate in a week, though Sir Benjamin never takes the trouble to look after them. The subsequent management is simple. As soon as time has been given for the sores left by the separation of the ligatures to heal, small doses of the lenitive electuary should be given at night, and a lavement of cold water used every morning.

"I conceive (says Sir Benjamin) that this is not only one of the most effectual, but one of the safest operations in surgery. I should think I must have performed, or seen it performed, between 200 or 300 times. I saw one patient who died after the operation, in consequence of diffuse inflammation of the cellular membrane running up on the outside of the gut as high as the mesentery; but that was a patient whose constitution was broken down by long-continued hæmorrhage, and in whom any slight accident might have produced equally bad consequences. I saw another patient, who, a week after the operation, and having been quite well in the interval, had an attack of pain in the abdomen, and shivering attended with fever, and died. I was not allowed to examine the body after death. I could not make out at the time that the symptoms had any connexion with the operation, nor do I believe that they had; but I mention the case because, as the body was not examined after death, I have no certain knowledge on the subject.

The operation then is so safe an one, that in practice all idea of risk may be properly left out of calculation.

Sir Benjamin concludes his account of hæmorrhoids by noticing a supposed case, in which the patient will not submit to an operation, or in which an operation is for other reasons inadmissible. In such a case the patient may wear what is denominated a truss for prolapsus ani, though, in point of fact, prolapsus ani is confounded both by instrument-makers and surgeons with piles. It is made with a spring which fits round the pelvis, and so far resembles a spring truss for a hernia; but at the back part, fixed at right angles to the circular spring, there is another spring which descends behind the sacrum, taking the course of that bone, and terminating below in a pad, which rests on the anus. The elasticity of the spring supports the pad, keeps it pressed against the anus, and prevents the protrusion of the internal piles.

## Prolapsus of the Rectum.

"I have just observed," says the able lecturer, "that it is very common to confound *prolapsus of the rectum* with internal piles. This error is committed not only in common conversation, but by surgical writers; and hence it is that no good account, so far as I know, has ever been published of the first-mentioned disease. But the difference between internal piles and real prolapsus of the rectum is this: in the protrusion of the former, the mucous membrane covering them descends, and may be seen below the anus; but it is only the mucous membrane, there is no descent of the muscular tunics; whereas, in the latter, the whole of the rectum comes down, and sometimes as much as twelve inches in length. I have never dissected a case of prolapsus of the rectum; but it is impossible to examine a genuine instance of this displacement in the living person without being satisfied that the muscular tunic is protruded, as well as the mucous membrane. There being such a marked difference between prolapsus of the rectum and internal piles, nothing can be more absurd, or unscientific, than to confound these two diseases with each other."

Sir Benjamin illustrates the pathology of this disease by that of intussusceptio. They are analogous in nature; a portion of the bowel slipping in the one instance within another portion—in prolapsus of the rectum, a portion of the bowel slipping out at the anus.

Prolapsus of the rectum occurs most frequently in children, and especially in those with large tumid bellies and costive bowels, where the whole mass of the intestine becomes too large for the cavity which contains it. Simple dissection will inform us why children are more liable to this disease than grown-up persons; it is because the prostate gland, urethra, vesiculæ seminales, and all these parts, are not so much developed as in the adult. The attachment of the rectum to the surrounding parts does not extend so high in children as in persons of mature age, while the reflection of the peritoneum takes place lower down, and hence the rectum is more liable to be pushed out.

In adults prolapsus of the rectum sometimes occurs as a consequence of piles. The patient having been liable to the protrusion of internal piles, and the sphincter muscle having been thus continually dilated, the rectum is more liable to slip out, than it would be if this dilatation had not taken place. Sir Benjamin sees the disease in grown persons every now and then; it has generally commenced in early life.—When prolapsus of the rectum is combined with internal piles, the latter are situated at the upper part of the prolapsus—that is, close to the orifice of the anus, forming a zone around the gut; and the colour and appearance of the mucous membrane covering the protruded piles is altogether different from that of the membrane covering the rest of the gut.

"The inconvenience which the patient suffers from prolapsus of the rectum varies very much in different cases. Sometimes it comes down occasionally after a costive motion only, and is easily pushed up; and when pushed up it remains in its place till some accidental circumstance brings it down again. In other cases you return it, but the moment the patient begins to walk about, down it comes again; and in instances of long standing, the bowel becomes so fixed in its unnatural position, that you cannot return it by any means, and then other inconveniences follow. The rectum having been constantly protruded, becomes inflamed from friction, ulcerated, sore, tender, painful; and where the protrusion has existed for a long time, you will find it covered by a kind of cuticle."

We extract entire the treatment of the several varieties of prolapsus, adopted by Sir B. Brodie.

"When you are called to a child labouring under prolapsus of the rectum —and these are the cases that you most frequently meet with—you will almost invariably relieve him in the following manner:—Purge him with calomel and rhubarb occasionally; be very careful about his diet, that he does not eat a great quantity of vegetable substance, which tends to fill up the cavity of the bowel, while it affords but little nourishment; and every morning let some astringent injection be thrown up. The injection which I have generally used is a drachm of tinct. ferri muriatis, in a pint of water; and two or three ounces, or more, of this, according to the age of the patient, may be injected into the rectum every morning, the child being made to retain it as long as possible. I never saw a case of prolapsus of the rectum in a child, which was not cured in this manner.

If you are consulted about an adult labouring under this disease, and it has been consequent on a protrusion of piles, the first thing to be done is to destroy the piles. Let the patient sit over a pan of hot water, and the sphincter muscle being relaxed and the parts distended with blood, the piles and rectum will all protrude together: you must then tie the piles, which you can easily do, your assistant holding the rectum on one side, while you apply the needles and ligatures on the other. Having tied the piles, you return the rectum into its proper place; and you will probably find that in curing the piles you have also remedied the prolapsus of the bowel. But if the patient neglects himself afterwards, as the piles return so the prolapsus returns with them.

Where the disease is not complicated with piles, in those cases which occur occasionally in which prolapsus of the rectum has begun in early life, and has continued to adult age, the cure is very difficult, and perhaps impossible. The patient must be retained in the horizontal posture, for then the rectum is much less likely to protrude than when he sits up: he ought not to sit up even for an evacuation, but should have a bed-pan. Whenever the rectum protrudes, it should be pushed up again; an astringent injection should be employed daily, and the patient should be put through a course of Ward's paste. This plan affords him the best chance of a cure which he can have, but I will not say that it will always be successful. I remember trying it for a great length of time in a woman in the hospital, and, after lying many weeks in bed, when she got up the rectum came down as before; nay, it came down sometimes when she was in bed, even in the horizontal posture. In these cases, however, you may employ with advantage the truss for prolapsus of the rectum, which I mentioned as applicable chiefly to bad cases of internal piles. There was a patient in the hospital (a soldier) who had, I suppose, eight or ten inches of the rectum constantly protruded, and it could not be returned. After trying various means for a length of time, he left the hospital as bad as when he came in, and I do not know what became of him. It occurred to me afterwards, that in such a case as this it might be advisable to apply ligatures, and then cut off the protruded gut; for though the disease is not immediately dangerous, yet it must be regarded as ultimately so; and it might be worth while for the patient to run some risk at the time, for the chance of subsequent cure. I do not know that such an operation has ever been performed; but is it not deserving of consideration whether we ought not to have recourse to it in certain cases? There is a natural cure of bad cases of intro-susceptio, the analogy of which is in favour of the practice which I have just suggested. In the cases to which I allude, one portion of gut being protruded into another, the protruded portion is constricted by the edge of that into which it has passed; the circulation in it is stopped, and it sloughs away as if a ligature had been put round it. In this manner a portion of gut, eight or ten inches in length, has sometimes come away, and the patient has lived and done well afterwards. Several cases of this kind are on record; and I once had an opportunity of dissecting a patient who died when the sloughing process was taking place. If such an operation as I have proposed were to be had recourse to, the gut must be included in several ligatures, so that the orifice of it may not be obstructed, as it would be by a single one."

## EXCRESCENCES OF THE RECTUM.

Sir Benjamin Brodie briefly mentions three kinds of excrescences which spring from the internal lining of the rectum, and may, by persons unacquainted with their nature or careless in their examinations, be mistaken for piles. The first are like uterine polypi in structure—the second is a large excrescence, not, it would appear, malignant—and the third would seem to spring from the combination of external piles and filth.

1. "Here," says Sir Benjamin, "is an excrescence—a sort of polypus. It is, as you see, of a small size, but I have seen them as large as the finger. It seems to be of the same structure as the polypus of the uterus. This kind of excrescence is by no means uncommon. Sometimes there is a single one; at other times there are two or three growing from the mucous membrane. In some instances they occasion the patient scarcely any inconvenience, while in others they give rise to the most extraordinary suffering. What is it that makes this difference? The patient suffers in those cases in which the excrescence comes down when the bowels act, and gets pinched by the sphincter muscles. Under these circumstances it is liable to become ulcerated, and then the pressure of the sphincter ani always induces excessive pain, which continues not only till the excrescence recedes, but for some time afterwards. A lady sent to me complaining of what she called very bad piles. On examining the rectum, I discovered a little polypous excrescence, in a state of ulceration, sticking in the sphincter muscle. I took hold of it with a pair of forceps, and snipped it off with the scissors. She felt hardly any inconvenience from the operation, but, to her surprise, though she had been enduring a great deal of pain, and had been miserable for months, from this moment she was well. A lady, not long since, came to my house, from a distance in the country, in whom most severe sufferings were occasioned by one of these polypi being ulcerated and entangled in the sphincter muscle. I immediately snapped it off; she was completely relieved; went home, I believe, on the same day, and I have no doubt has been quite well ever since."

2. The second species of excrescence described by the able lecturer, is large as we have said, and apparently not of a malignant nature. He describes it by a preparation which we cannot shew, and by a case which we can.

"This preparation," he tells his pupils, "I removed from an old lady, 80 years of age. She sent to me, complaining of pain about the rectum, and hæmorrhage. I thought there were probably internal piles, and that it was not worth her while, at so advanced an age, to go through any operation, and I prescribed her some trifling medicine. She sent to me again, to say that she had lost a great deal of blood, and could not pass an evacuation from the rectum without the greatest difficulty. I introduced my finger and found a large excresence, of which this specimen is only a portion. It seemed to be a matter of necessity that something should be done for the patient's relief: I therefore introduced my fingers into the rectum, gradually dilated the sphincter muscle took hold of the excrescence, pulled it down, tied a ligature round its neck, and then snipped it off below the ligature. No harm followed the operation; the patient was perfectly relieved, and lived some two or three years afterwards. I believe the excrescence returned before death, but still she suffered no inconvenience from it."

3. The third kind of excrescence would seem to resemble condyloma in its origin—iritation of the cutis from moisture and filth.

"These excrescences were, I believe, orignally external piles, and they are not very uncommon. I mentioned in the last lecture, that when the cavities of external piles become obliterated, they generally form flaps of skin, which gradually waste; but sometimes diseased action takes place in them, and they become converted into excrescences similar to those which grow from the nymphæ of women. They are generally connected with dirty habits; the parts get irritated by the dirt, and so the piles become converted into these excrescences, into which they would not be converted in a more cleanly person."

We beg to direct attention to these valuable observations. They bear the common stamp of all the writings of the able and estimable Baronet—simplicity and truth. The reader on this, as on other occasions, is struck with the plain unvarnished sense that marks the acute observation and induction of a philosophical mind. There is none of that erring spirit of speculation from which so few medical writers are free, but plain truths are told in an unaffected style. This it is which gives to all that falls from the mouth or pen of Sir Benjamin Brodie, the value which pupils and the profession alike combine to attach to it. The class of St. George's Hospital enjoy the advantage of listening to the precepts and observing the practice, of this, we say it in absolute sincerity, the most philosophical (if philosophy be the pursuit of truth)—the most philosophical, we repeat, of modern surgeons.

## SOME REMARKS ON ULCERATIONS OF THE RECTUM OCCURRING IN CONNECTION WITH VENEREAL SECONDARY SYMPTOMS.

By HENRY JAMES JOHNSON, late House Surgeon to the Lock Hospital.

I am not aware of the existence of any good account, or indeed of any account at all, of the ulcers of the rectum I am about to describe. In this, as in many other instances, writers on venereal diseases would seem to have contented themselves with copying or criticising each other's observations, without referring to, or, at all events, with only partially studying the facts that Nature presents. Some speculative points have engaged their attention, and excited amusing or acrimonious discussion. The origin or the introduction of syphilis, a question which can never be decided at all, or if decided, would lead to no useful result—the true chancre, a something like the Basilisk in Zadig, which has never yet been found, and if found would be valueless—the abstract identity of syphilis and gonorrhæa, two diseases which display the most opposite phenomena, and require the most opposite methods of treatment—such matters as these we find liberally noticed, and writer after writer contributes his small share to their elucidation or confusion. But a careful observation of the malady as it is—a rigorous study of its forms—and a plain and straight-forward analysis of its varieties—these practical excellencies unhappily are not evinced by the cloud of authors, the mere enumeration of whose names and works form a bulky volume.*

It would be tedious to point out the many venereal symptoms which have received an inadequate degree of attention—inadequate, at least, to the practical result of distinguishing their varieties and discriminating their treatment. It is true that numerous forms of venereal sores have been described by authors. Yet in these descriptions we observe the utmost discrepancy and vagueness, and not only do not two writers employ the same names, but they do not present the same images of the same things. There are many varieties of venereal ulceration of the throat—many of venereal eruptions on the skin; but I know of no work in which they are plainly and faithfully portrayed, none which have corresponded with the facts that I have witnessed. Nature then must vary and contradict herself, or observers must be careless and inaccurate. The choice of these alternatives may be safely left to the judgment of the reader.

---

* This is a fact. Some gentleman shewed me a catalogue of this description. He had I believe a large proportion of the works. I cannot suppose him guilty of reading them.

Without pursuing farther at present this train of general remark, I shall throw together a few desultory observations on some instances of venereal ulceration of the rectum, that have fallen under my observation in the last two or three years. Those instances have not been numerous, with all the opportunities that the Lock Hospital presents for extensive observation. Ulcerations of the rectum then, primary or secondary, are probably not frequent, though certainly they are more common than the general silence on the subject would imply. The following brief remarks may be considered the condensed expression of the particulars of the cases I have seen.

## I. ULCERATION OF THE RECTUM IN CONNECTION WITH CONDYLOMA.

I am not aware of having seen distinct primary ulceration, except in connexion with condyloma. Condylomata not unfrequently ulcerate, and the ulcerated fissures may reach the anus or even pass for a slight distance within it. The presence of the condylomata is sufficiently distinctive of this species of ulcer.

Ulcerated condylomata, or condylomatous ulceration in the vicinity of the rectum, is frequent in the lower class of prostitutes. The discharge from the vagina dribbling down and collecting in the perineum and between the nates, give rise to condylomata; uncleanliness, irritation, and perhaps the nature of the disease itself, make those condylomata ulcerate. The disease is thus produced in the filthy women that infest the streets, and form a large proportion of the inmates of the Lock Hospital. But it also occurs under circumstances where its presence would not be so natural. The following case, which is curious in more respects than one, bears upon the present subject.

*Case.* A gentleman who had been a patient of mine previously with secondary ulceration of the throat, and an eruption consisting of copper-coloured stains, came to me lately with what he said was an excoriation. He had had connexion on the preceding night with a female whom he said he could not suspect, a *lady* who was kept by a friend of his own. The excoriation was seated on the inner prepuce, at its angle of reflection behind the corona glandis. It was extensive, superficial, with a slightly yellowish surface. I told the gentleman that the sore had something more than the aspect of a simple abrasion of surface. He was confident that he was right, and simple means were adopted and pursued for a fortnight. At the expiration of that period the sore had more decidedly the character of syphilis. I insisted on a change of treatment. He wished the lady to be submitted to an examination. To this she readily consented, declaring at the very instant that her clothes were raised, that she was free from all complaint. A very slight inspection disclosed a condylomatous sore at the inferior commissure of the vagina, and another at the anus, partially extending within that aperture. This settled the question at once. I immediately put the gentleman on a course of mercury, and the sore upon the prepuce, that had previously been spreading under simple treatment, cicatrized with remarkable rapidity.

The chief interest of this case is connected with the communication of condylomatous ulceration. The condyloma, it is well known, or at all events it is believed, may result from the irritation of gonorrhœal matter. The condyloma so produced very frequently ulcerates, and forms a sore. That sore was communicable in the case I have related. Of condylomatous sores I have seen very numerous examples, but I never before had an opportunity of observing the ulcer that they were capable of giving rise to. That ulcer has, or in the case in question had, the characters of distinct syphilitic ulceration—a yellow surface—a thin edge rather undermined—and a distinct substratum of induration.*

I will take the liberty of introducing here a few observations appended to a former paper upon condyloma. They bear upon the present case though not upon the present subject.

"It will probably have occurred to the minds of some of the readers of this paper, that a striking singularity attending condyloma is its origin in gonorrhœal discharge, and its power of giving rise to secondary symptoms. We not unfrequently hear surgeons talk of gonorrhœal sores and gonorrhœal secondary symptoms. So far as my observation has extended, their ideas have been as vague as their language is indefinite. Unless condylomatous ulcerations be considered gonorrhœal, I have seen none, nor have I ever witnessed a fair example of secondary symptoms following uncomplicated gonorrhœa. Making no pretence to theoretical speculations, I merely offer the results of observation. If that observation be correct, condyloma would appear to form some intermediate state between gonorrhæa and syphilis."

Condylomatous ulceration of the rectum sometimes presents itself in men. As in them there is no surface like that of the vagina to supply a free discharge, which flows towards the anus and collects in its vicinity, we must look for some other efficient cause. Charity may suppose that filth is adequate to the production of the effect. But the surgeon of a hospital devoted to venereal cases is compelled to think, indeed must feel convinced, that in some instances an agency more criminal than filth has given rise to the disgusting complaint. During the period of my residence in the Lock, I had under my care as out-patients two men, with extensive condylomatous ulceration of the rectum, in whose cases there was little reason to doubt that the cause was such as I have only dared to hint at.*

I do not think it necessary to say any thing here on the treatment of condylomatous sores. For that I must refer to the paper already quoted, and contained in the 41st number of this Journal.

## II. PHAGEDÆNIC ULCERATION OF THE RECTUM.

The ulcers of the rectum which I have witnessed in connexion with secondary symptoms have been of three descriptions. Of the two first I have seen severally but a single case; of the last I have observed many.

*Case.* A woman was received in the Lock Hospital under these circumstances. She appeared to be in an indifferent state of health. She had not been on the town, but had merely had intercourse with two or three persons. About three months previously to her admission, she had first found a sore and discharge from the vagina. For this she spontaneously took mercury so as to affect her mouth. She got better, but after a short time relapsed, and now began to suffer from pain in the rectum, and, as she thought from piles. She again put herself under a course of mercury which she carried to profuse salivation. This reduced her greatly, and had occasioned the indifferent condtion of health remarked on her reception in the hospital.

---

* I have freely used the terms condyloma, and condylomatous sore. For the sense in which these terms are employed, the reader must recur to the 41st number of this Journal. If he has not read the paper contained in it, he will not understand the present case. The desire of avoiding repetition is my excuse for contenting myself simply with the present reference.

* A slight acquaintance with continental medical literature is sufficient to establish the melancholy fact—that primary ulcerations of the rectum are frequently abroad in both sexes. Those ulcerations probably display their share of the varieties observed in primary sores upon the genitals.

On examination there was discovered at the junction of the nympha and labium of the right side, a deep, sloughy-looking sore, with thin edges, a foul yellowish red surface, and little or no surrounding induration. The sore bled readily. A bloody offensive discharge also issued from the anus. There was no ulceration of the rectum within sight, but on introducing the finger into the gut, an oval ulcer, larger than a half-crown piece was distinctly felt on the posterior wall of the bowel. So far as the discharge went, and as well as the finger could determine, the characters of that ulcer resembled those of the sore in the vagina. On the left hip near the great trochanter was a large scab of rupia, and one or two other but smaller rupia spots appeared on the lower extremities.

Was this a primary or secondary ulcer of the rectum ? The symptoms that seemed to mark its commencement and the rupia had appeared nearly simultaneously, some time after the establishment of the sore in the vagina. Whether primary or secondary, the nature of the sores—the rupia—the bad health—and the course of mercury so lately taken were ample reasons for objecting to give more. The patient was therefore ordered sarsaparilla, at first in the form of decoction and afterwards in that of syrup. Good diet and wine were conjoined with the administration of the sarsaparilla. Various applications were used to the ulceration in the rectum, but a moderately strong solution of the nitrate of silver, injected into the rectum with a syringe, was the application that agreed the best and was employed the most.

At first, the patient gradually grew worse. The sore in the vagina increased in size, though not materially—the rupia-scabs separated, and left ulcerations of a circular form, and disposed to spread with a yellow border and undermined edge ; that near the trochanter attained the dimensions of the central part of a cheese-plate—the ulcer in the rectum manifestly extended, for the bloody discharge was profuse, and the pain, at all times great, became excruciating on the passage of a motion—and, finally, the patient became extremely emaciated, and so reduced in strength that she seemed not unlikely to sink.

Under these circumstances, small quantities of mercury were tried in conjunction with the sarsaparilla and other tonics. But she did not amend, on the contrary, she deteriorated under this treatment. The following plan was then adopted and steadily pursued.—Full doses of the syrup of sarsaparilla were given for three weeks or a month at a time, discontinued for a week, and then repeated as before. Suppositories of opium and belladonna were introduced, in order to relieve the excessive pain—occasional mild doses of rhubarb, combined with hyosciamus and laudanum, regulated the condition of the bowels—injections of the solution of the nitrate of silver were made use of. In addition to these medicines the patient was allowed a generous diet, and half a pint of port wine daily.

So soon as this plan had been for a short time in steady operation, a perceptible amendment ensued. The large and sloughy rupia sores slowly healed—the vaginal sore healed also—and the discharge and other symptoms of the ulceration in the rectum tardily subsided and finally disappeared. Yet ten months were consumed in effecting this, and at the expiration of that long period when the patient left the hospital for the country, she was so reduced in strength, that she was scarcely able to walk down the hospital stairs. Prior to the adoption of the method of treatment detailed above, she appeared to have little chance of ultimate recovery.

It is perhaps uncertain whether the ulceration of the rectum was primary or secondary in its character. The probabilities are in favour of the latter supposition, for the symptoms denoting its existence appeared simultaneously with rupia. Whether primary or secondary, its connection with the rupia, the condition of the health, the danger of the patient, and, I may add, its own appreciable characters, are sufficiently decisive of its phagedænic nature—the term phagedæna implying no more than a foul condition of the sore, and a disposition to extend by a combination of sloughing and of ulceration, without involving any hypothetical considerations whatever.

The plan of treatment which answered in this instance was, repeated short courses of the syrup of sarsaparilla, with brief intervals between each course. I may take the opportunity of remarking that in cachectic cases, where the health is impaired—and the ulcerations whether primary upon the genitals, or secondary in the throat or on the skin, assume the phagedænic character—and, finally, in cases of affection of the periosteum or bones, too frequently combined with, but occasionally independent of the form of ulceration I have mentioned—in such cases, where sarsaparilla and tonics must be long continued, the most useful mode of exhibiting the former is in short courses of this description. Between each course some mild aperients should be given. The infusion of rhubarb with infusion of orange-peel and a few grains of carbonate of soda answer well. Sarsaparilla sometimes occasions relaxation of the bowels, but it usually disposes to constipation, and purgatives are commonly required during its continuance.

### III. ULCERATION OF THE RECTUM, WITH ULCERATION OF OTHER MUCOUS MEMBRANES.

If the nature of the preceding case is dubious, I mean if it is uncertain whether the ulceration was primary or secondary, the same cannot be said of the one I shall now describe.

*Case.* A young man, the proprietor of a public-house in the Strand, applied to me a few months ago, on account of a peuliar ulceration of the lip. Nearly the whole of the exposed part of the lower lip was occupied by an irregular superficial ulceration. It was situated on the border, and partly on the internal surface, where the lip is invested by the mucous membrane,* but it did not spread beyond the red part on the external skin. It was so superficial, that it looked like the ulceration left by those burns which only destroy the superficies of the cutis. It was white in its colour, and its irregularity was partly occasioned by its healing in one direction and spreading in another. The spreading edge was always an abrupt one, and peculiarly white. On examining the throat I discovered precisely similar ulceration on the soft palate and on either tonsil. There was no eruption on the skin.

It appeared that, two or three months previously, the patient had suffered under what he considered, and a surgeon treated, as ordinary gonorrhœa. The ulceration of the lip had existed for about a week; he was not aware of the presence of any ulceration in the throat. He denied having had any venereal sore.

Never having witnessed secondary symptoms after gonorrhœa, I thought that this was a proof of their occurrence, and an example of their character. An inspection of the scrotum staggered me in this opinion; in fact, it appeared to shew that it was erroneous. On the inferior surface of the penis, and anterior surface of the scrotum, were several almost tubercular deposites in the cutis, cupped in their centre, where some were slightly ulcerated still, and some presented the cicatrices of ulceration. These sores were such as I have frequently seen, and which have always displayed the phenomena and history of syphilitic ulcers. In order to observe the progress of the symptoms, I ordered some bread pills and some mild aperients.

The ulceration of the lip slowly travelled over its entire red border, and extended downwards on its inner surface. The ulceration of the soft palate also spread to the contiguous cheek and gum; but the characters of neither essentially varied, and it still remained as superficial as before, and still retained the peculiar whiteness. Other symptoms, however, were developed. Ulceration of a similar description was established on the tarsal margin of the palpebral conjunctiva of the left eye: it began at the inner angle, close to the punctum lacrymale, and gradually spread outwards. Soon after this, the other eye became affected in exactly the same manner. And, finally, ulceration, still of the same character, white and superficial, appeared upon the margin of the anus, or rather just within it, not extending on the common cutis. These ulcers of the lower portion of the rectum were productive of some, but not great pain.

---

* I use this term to make myself understood. The inner surface of the lip is covered with cuticle, beneath which is seated what geologists would denominate a *transition* structure between cutis and mucous membrane. But the anatomists prefer the latter.

I now put the patient on a course of three grains of blue-pill twice daily, and combined sarsaparilla with the mercury. Black wash only, the lotion previously employed, was applied to the ulcerations of the rectum and the lip.

Under this treatment all the ulcers healed, the deposites in the cutis of the scrotum were removed, and perfect health was re-established. I have seen the patient lately, and no return of the symptoms has occurred.

White ulceration of the tonsils is the most frequent secondary symptom after ulcerated condyloma. In one case, I saw also general, white superficial ulceration of the lower lip, exactly resembling the ulceration of the lip in the preceding case. In that case, one remarkable feature is the co-existence of a peculiar ulceration in the mucous membrane of the lip and throat, the mucous membrane of the eye, and the mucous membrane of the rectum. I have seen no other case precisely similar to this.

### IV. ULCERS OF THE RECTUM, ACCOMPANYING VARIOUS SECONDARY SYMPTOMS.

This form of ulceration of the rectum is certainly not very rare. I have seen five or six cases of the kind. It is usually observed in women; at least I have seen it but once in the male.

The patient's attention is usually first directed to the part, in conseqence of extreme pain on attempting to discharge the fæces. He frequently observes a small quantity of blood in the motion, and one or other, or more frequently both these circumstances, induce him to consult the surgeon.

The state of the rectum varies with the stage of the complaint, for at first there is usually one ulcer only; but several are formed in succession, and some may run into each other and become confluent. More frequently, one forms upon one side of the gut, and others aredeveloped consecutivelyround it. The ulcers that form first are on the margin of the anus, where the skin and the mucous membrane are continuous—those which appear afterwards are higher in the gut, and the late ones are out of sight (unless the speculum be used), and require examination with the finger. To detect these ulcers, the anus must be stretched open, and its folds undone. If this is neglected, the small sores will sometimes escape observation. Sometimes these ulcers, situated round the anus, assume a radiated form.

The character of the ulcers is well marked. They commence as a yellow spot, evidently produced by an ulcerated aperture in the cuticle, displaying a small yellow ulcer in the cutis. The ulceration enlarges, but seldom attains the dimensions of a sixpence. Its surface is yellow, at first slightly cupped—afterwards the seat of small spongy granulations. The edge is undermined. When cicatrization commences, the yellowness is, of course, exchanged for vascularity, and when cicatrization is completed, little perceptible induration remains.

These ulcers occasion excessive pain. This is violent on attempting to void a stool, and remains for hours afterwards. The patient dreads the idea of a motion. But pain comes on in paroxysms, independently of the action of the bowels, and sometimes it is so severe at nights as to keep the patient awake in agony. Examination of the bowel by the surgeon generally causes a great deal of suffering; so does the application of the necessary remedies.

I am not aware of the natural course

and termination of these ulcers, independently of the influence of medicine. The pain and distress which they always create drive the surgeon to decisive treatment, and prevent the performance of the rational experiment of non-interference.

I observed that I had witnessed five or six examples of this description of ulceration of the rectum. In all, secondary symptoms were present; yet it is a source of considerable regret, that I am enabled to speak positively to the nature of those secondary symptoms in but three.

1. In a girl at the Lock Hospital, who was affected with these ulcers, there was a yellowish, superficial ulcer at the inferior commissure of the vagina, some spots of syphilitic psoriasis guttata on the trunk and lower limbs, and superficial yellowish ulceration of the tonsil. This patient was suddenly dismissed for improper conduct, and I am not acquainted with the termination of the case.

2 Another girl was received into the Lock Hospital, on account of suppurating bubo. There was copious discharge from the vagina, and small superficial ulceration on the outer surface of the right nympha. Soon after her admission, she became affected with superficial ulceration in the throat, and after that she was attacked with violent pain at stool, and a slight discharge of blood with the motion. On examination, I discovered two or three ulcerations in the rectum, situated near the outer margin of the anus. I ordered the patient calomel and opium—the application of the nitrate of silver every other morning to the ulcers—and suppositories of opium and belladonna at night. She perfectly recovered.

3. The following case occurred to me lately. A young gentleman, in a very indifferent state of health, applied to me on account of ulceration of the throat, and some other symptoms of a venereal character. The ulceration was situated on the tonsils—it was yellowish, superficial, attended with some enlargement of the tonsils. On the body and limbs there were a few copper-coloured stains, attended with distinct, though not with great deposition in the cutis; the surface of these stains was rather inclined to desquamate than to scab. There was chronic inflammation of one testis, with fluid in the upper part of the tunica vaginalis. This patient was not aware of any distinct primary sore. He had been under some very good surgeons for the ulcers in the throat and the eruption, and had been told that they were not venereal, and that he need not take mercury. Yet sarsaparilla, and the other items of the treatment which they recommended, had proved inadequate to effect a cure. I felt convinced that the ulceration of the throat was syphilitic, and stated my opinion to the patient. But his health appeared unequal to support the exhibition of mercury, and sarsaparilla and country air were the measures recommended.

He went into the country, but speedily returned with what he thought were hæmorrhoids. He had violent pain on going to the stool, and a slight discharge of blood from the rectum. On examination, I found that an ulcer, of the character that has been sufficiently described already, was seated at the margin of the anus, on the right side. Soon after this, another ulcer formed on the left side of the gut; and next, a third, upon its posterior surface. These ulcers were all external, that is, they could be seen on moderately opening the aperture of the bowel. They successively healed under the treatment adopted; but now another sore formed within the gut, and could be felt with the finger on its posterior wall; it appeared to be about the magnitude of a shilling. This also cicatrized and no return of the ulcerations of the rectum has been noticed.

From the time when the ulcers of the rectum first appeared till their perfect cicatrization, a period of six or seven weeks, this gentleman suffered occasionally to a great degree. The ulcers, at their commencement, were severally productive of the greatest agony, especially at stool. Each ulcer existed from ten days to a fortnight, and, when one was healing, another was in the stages of formation and increase.

The treatment which I followed up was this. Two grains of calomel and half a grain of opium twice daily for two months —sarsaparilla—nutritious diet, least calculated to make fæces—castor-oil in small quantities every other morning—and latterly, with almost immediate relief, a suppository of belladonna and opium. The ulcers were touched every third day with the nitrate of silver in substance, and an injection of the solution of the sulphate of copper was thrown into the rectum night and morning. When the ulcer which has been mentioned formed internally, it was found impossible to touch it properly with the caustic in the solid form, and an injection of its solution, twenty grains to the ounce, was introduced by means of a silver syringe, every third day, in its place.

The treatment of these distressing ulcers of the rectum, distressing, from the pain which they occasion, should, so far as I know, be as follows—at all events I have found this answer the best. Calomel and opium, so as gently to affect the mouth—the judicious employment of sarsaparilla and tonics—small doses of castor-oil, to obviate the occurrence of bulky fæces, and diet selected and adapted for the same purpose—rest in the horizontal posture; such are the general principles of treatment which I have found most applicable to the disease. The local treatment is of paramount importance. The sores should be touched, every second or third day, with the lunar caustic, and, in the interim, injections of zinc or copper, or some other stimulant or gentle escharotic, should be used. When the ulcers are not perfectly accessible to the solid caustic, its strong solution should be employed as an injection. The bidet, or the hip-bath, should be used two or three times daily. When the pain is severe, particularly at nights, an opiate suppository is almost always useful.

Such are the remarks I have to offer on the subject of venereal ulcerations of the rectum. They are imperfect, it is true; but, so far as they go, they are exclusively the result of observation, and their very imperfections may stimulate others to endeavour to supply the deficiencies which they exhibit.

## MISCELLANIES.

### BIRMINGHAM SCHOOL OF MEDICINE.

We have perused, with much pleasure, an eloquent oration, delivered on the 6th of October last year, by Dr. John Johnstone, on the occasion of passing the laws and regulations of the Birmingham School of Medicine and Surgery. In this school, as in many other places, "narrow indeed were the means, few were the powers, and small the accommodations of those persons whose intentions are realized this day."—Though Birmingham, the metropolis of the West, has hitherto brought forth no Linacre to frame a royal college—no Harvey to embellish it with an immortal discovery—yet its founders may congratulate themselves on having laid the foundation of a temple of science that will radiate benefits on countless generations yet to come. It was only in 1828 that the Birmingham school originated. "In it there was neither monopoly, nor the appearance of monopoly. The lectureships were offered to *all* the physicians and surgeons of the hospital and dispensary, according to seniority." On this point we cannot agree with the talented orator. It does not fall to the lot of every individual to belong to an hospital or a dispensary—neither is it the inevitable consequence that talent, learning, and experience shall be exclusively concentrated in the said medical officers. But let that pass. Up to 1829, the School had only the convenience of "ONE ROOM FOR ALL ITS PURPOSES." The lecturer on anatomy offered to build a set of rooms, provided the body of lecturers guaranteed a certain rental; but this proposal appears to have failed, and aid was sought from the "neighbouring patrons of science." Succour was obtained from this source, and the institution attained its present form and features. Medals and prizes were offered and awarded by liberal individuals, and to these honorary stimuli the pupils have ably responded. The orator gratefully records the emphatic lecture on hernia delivered by Mr. Bransby Cooper, at the first meeting of the institution, and the admirable effects which it produced on the pupils. The fruits of the instruction communicated and received at this school appear to be of the most gratifying kind. Gentlemen have been there educated, who have been marked with pointed sanction and praise by the London College of Surgeons, and the Hall. And the neighbouring counties can boast of practitioners of the very first respectability and talent, emanating from the same Alma Mater.

It appears that the greatest praise is due to Mr. Laws Cox, under whose fostering care a princely museum has sprung up, as it were, by magic. Stores of most curious and useful anatomical preparations have been accumulated—unrivalled wax models procured—a museum of natural history added—and a library to crown the whole.

The laws which are appended to this address appear to be devised by wisdom, and adapted to general utility. To this code of laws—or rather to the institution itself, we shall only add the sincere valediction—*esto perpetua!*

### Population Returns.

From these voluminous reports, collected and arranged by Mr. Rickman, we shall here extract a few particulars relative to the comparative mortality in different parts of England. A wonderful influence is exerted on the health, habits, comforts, &c. of people by the coacervation or domiciliary isolation of families. Thus in England and Wales there are 117 families to 100 houses—in Scotland, 133 to 100—in Ireland, 110 to 100. But the circumstances in the three kingdoms are so very different and diverse, that no inference can be drawn from a comparison on this point. London and Liverpool, however, may be compared in this respect, as they are somewhat similarly situated. In London there are 171 families to 100 houses—and the annual mortality was 1 in 44 in the year 1830. In Liverpool there are only 131 families to 100 houses, and the mortality was 1 in 52 of the population during the same year. Hull has 134 families to 100 houses—and the mortality is 1 in 49. Bristol shews 131 families to 100 houses—the mortality 1 in 61. This shews that the degree of isolation will not account entirely for the degree of salubrity. Liverpool and Bristol are situated alike in this respect, and yet there is a great difference in the ratio of mortality. The late Dr Currie has assigned one cause for the greater mortality of Liverpool—the residence of numerous families in cellars or under-ground apartments. Again, in Manchester there are 116 families to 100 houses, and the mortality is 1 in 30!* whilst in Birmingham, where there are 105 families to 100 houses, and the mortality is 1 in 68—not one half of the Manchester mortality! This enormous disproportion in our two great manufacturing towns, must be owing chiefly to the greater destruction of juvenile life in Manchester than Birmingham, for obvious reasons—namely the facility of employing young people in the former locality, and the intractability of the Birmingham material of manufacture, requiring adult hands. In the woollen manufactures the applicability of infant labour holds a middle-place, and the crowding of population and mortality are proportionately less. In Leeds there are 111 families to 100 houses—and the mortality is 1 in 48.

What must be the influence of concentration, then, in Dublin, where 252 families are *compressed*, for they can hardly be said to live, in 100 houses? What in Edinburgh, where 310 families conglomerate in 100 houses? Or in Paisley, where the astonishing number of 360 families exist in 100 houses? We have not the means, at present, of estimating the actual mortality in these places. It is curious, and, at the same time, melancholy, to observe that, while in England and Wales the ratio of coacervation has been dimishing 2 per cent. in the ten years between the last two centuries, that ratio has been increasing in Scotland, at about 2 per cent. In the two kingdoms together, it is satisfactory to see that, during the last decenniad, whilst the proportion of houses building is very nearly the same, the uninhabited houses are decreasing 60 per cent.

---

* Is it not remarkable that Dr. Hawkins should have been so deceived about the mortality in Manchester, which he makes, if we recollect right, 1 in 79!

The calculations which are and will be founded on these returns must operate a considerable revolution in the rates of insurance on lives, and the chances of survivorship. In earlier times the ratio of mortality was calculated chiefly from the returns of large cities, as most easily obtained; but now the case is quite altered, and indeed there can be no doubt that life itself has become more valuable—that is, of longer duration than it was half a century ago. It is evident that the public has, for very many years, been paying a much higher rate of insurance than was necessary or just—hence the general reduction of premiums which the competition of life-insurance-offices is now every where effecting.

## INTRODUCTORY LECTURE TO A COURSE OF PHYSIOLOGY AND PATHOLOGY. By DR. GRAVES.

It will not be expected that we should analyse an introductory lecture, which, like a King's speech on opening the Parliament, is usually composed of general expressions, from which little that is definite can be gleaned. The present lecture is one which is calculated to expand our ideas, and suggest a multitude of reflectiens. It is an attempt to afford a glimpse of the unbounded field which the medical philosopher has before him for his interminable investigations. The kingdom of animated nature is, of course, his country; and wherever he turns, he finds the subjects of his contemplation and investigation in swarms around him.

"In the warmer regions of the earth, where copious exhalations arise from rivers, swamps, and impenetrable forests, the insect inhabitants of the air swarm in such myriads, that they seem to the tortured traveller to fill the whole atmosphere, and at certain seasons of the year, their attacks become so troublesome and so incessant, that they force whole tribes of people to save themselves by a temporary migration.*

Even in the higher northern latitudes, the heat of the summer solstice calls to a short-lived existence swarms of mosquitoes, from which the Esquimaux, the Laplander, and the Samoied are forced to protect themselves by keeping their huts constantly filled with smoke. How far the upper regions of the atmosphere may be peopled has not been ascertained, but it seems improbable that winged insects exist to any great distance above the highest flight of the swallow and swift, although wanderers from the plains are occasionally met with at considerable heights on mountains. Thus, in traversing the highest accessible regions of the Alps and Pyrennees, I have met with flights of butterflies, the emblems of summer and of sunshine, migrating from some neighbouring valley, and, in their fluttering and devious course, almost touching with their fragile wings the hard surface of the glacier and never-melting snow, the types of cold and of winter.† De Luc, Ramond, Saussure, and Humboldt have all seen insects at heights equal to, or even exceeding, that of the summit of Mount Blanc. Of all animals the condor, or enormous vulture of the Andes, attains to the greatest elevation, for Humboldt saw it describing with expanded wings its aërial circles far above the highest peak of Chimborazo, where the barometer would have sunk below ten inches. The ocean seems to mark the boundary of that part of the atmosphere which is inhabited by winged insects, whose larvæ cannot find the necessary shelter and rest in its disturbed and unfathomable waters. But the depths of the ocean itself are not therefore untenanted; the waters everywhere teem with life, both vegetable and animal. Between the tropics the mariner, leaning over the side of his vessel, watches with interest the motions of the various species which every where swim around, and sees with pleasure the flying fish glancing through the air, where it is forced by its numerous pursuers to seek a momentary refuge. In the West-indian seas, where the water is extremely clear, and its depth but small, he beholds on the bottom a thousand varietes of sea-worms, star-fish, snails and muscles, besides fish in prodigious numbers, and, as he sails along the surface of the water, he passes over whole groves of luxuriant fuci and other marine plants, together with immense masses of gorgonias, corallines, and alcyonias. He observes too with delight sponges, which, as large as shrubs, present the most beautiful play of colours to the eye, and, as they softly undulate with the motion of the waves, produce the pleasing illusion of his traversing fields covered with a profusion of flowers.

---

* "Humboldt relates this fact.

† "Ramond (*Voyages au Mont Perdu* a work replete with original views and new facts) in climbing a very dangerous precipice, arrived at a spot where both advance and retreat seemed impossible. In this painful and hazardous situation, the appearance of a fly awakened a curious reflection. "Durant cette inaction qui devenait d'autant plus penible qu'elle se prolongeait davantage, la mouche apiforme vint se poser auprès de moi et nettoyer ses petites ailes dont nous etions reduits à envier la puissance!'"

In other regions, notwithstanding the rapid course of his ship through the water, the navigator day after day beholds the ocean all around thickly covered with luxuriant sea-weeds, which, floating on the surface loose and unattached, grow without roots, and, to the inexperienced, convey the idea of rocks and shallows, dangers still far distant.*

Were we to seek an illustration of infinity in point of number, we would find it in those shoals of cods, herrings, pilchards, or sprats, whose moving and almost solid masses occupy many leagues Even in the colder regions, and within the Arctic circle, the bosom of the ocean is scarcely less prolific of life. In some places, indeed, Captain Scoresby observed its waters tinged brown, as by a species of minute animalcula, which seeking light and heat near the surface, formed a living stratum not more than a few feet in thickness, but which covered a vast extent of the sea near the coast of Greenland. Captain Parry, while engaged in his bold attempt to reach the North Pole, observed that the little pools formed by the action of the sun on the surface of the snow and ice were full of animalcules.

On the coast of Greenland and other Arctic countries, the snow which covers mountains and valleys, and whose surface scarcely yields to the influence of the solar rays at midsummer, is in some places reddened* for miles together by a minute species of alga, which grows in vast quantity in the substance of the snow.

The infinity of animal life is exemplified in the most striking manner by a consideration of the *Infusoria*, an accurate and satisfactory account of which the student will find in a little work, illustrated by plates, lately published by Mr. Prichard, called the Natural History of Animalcules.

---

* "The immense tract of sea, covered by floating fuci, has been spoken of by many authors, and especially by Humboldt, *Relation Historique du Voyage*."

* "The redness of this snow, depending upon the presence of a minute alga, Protococcus nivalis, must be carefully distinguished from the red colour which Captain Parry observed on certain occasions, where the feet of his men or the bottoms of the sledges left impressions on the snow. This phenomenon was probably caused by a certain degree of transparency, which the surface-snow possessed in consequence of having been previously melted, and which allowed the transmission of the red rays alone through the parts forming the edges of the footsteps and sledge-tracks. The great obliquity of the sun's rays in so high a latitude favoured the production of this effect. No adequate explanation is given in the published account of Captain Parry's attempt to reach the North Pole over the ice. A most interesting paper, written by Count Xavier de Maistre, on the Colour of the Atmosphere and Deep Water, suggested this explanation. Vide Jameson's New Philosophical Journal, July 1833."

'The bare knowledge that there are myriads of atoms existing in a single drop of water, recreating and executing all their functions and evolutions with as much rapidity and apparent facility as if the range afforded to them was as boundless as the ocean, must carry with it an intensity of interest to the mind of every human being; of every one, at least, who is at all accustomed to meditate on the perfections of Nature, and to recognize and adore the hand which guides her through all the vast variety of her stupendous operations.' * * * * 'Until Dr. Ehrenberg adopted the expedient of introducing vegetable colouring matter into the fluid which supplies them with food, an experiment attended with the most successful results, these creatures were commonly supposed to be entirely devoid of internal organization, and to be nourished by the simple process of cuticular absorption. By the application of coloured substances, which, moreover, have been found to invigorate rather than to depress the animalcule, and to maintain it in the full exercise of all its functions, this erroneous notion is set at rest, and an internal structure has been discerned in some, equal to, if not surpassing, many of the larger intervertebrated animals, and comprising a muscular, a nervous, and, in all probability, a vascular system, all wonderfully contrived for the performance of their respective offices.'"

Dr. Graves explores the vegetable world with equal comprehension, and the whole lecture is more than usually interesting.

### DEATH THE GREAT LEVELLER.

The last few years have developed the most awful "SIGNS of the TIMES" without wars, or rumours of wars, we have had revolutions—and, as—

"Coming events cast their shadows before," we have had REVELATIONS, which betoken wonders still more wonderful than anything that has yet happened. If the shades of Tierney and Canning still hover round the purlieus of Palace Yard, how must they be astonished to see a WELLINGTON and a PEEL turn out professed—nay RADICAL REFORMERS? Could the bust of Baillie, in the College of Physicians, become animated, how would it stare, and smile—or perhaps grieve, on hearing the revolutions and changes which TIME is working in the new temple of Esculapius? But the wonder of wonders is yet to be declared—that Sir Henry Halford, the star of medical conservatism—the prop of privilege—the standard of prerogative—and the saviour of his "ORDER," should broach and preach the most revolting doctrines of revolution—anarchy—and annihilation, before an immense assemblage of princes, ministers, senators, philosophers, physicians, &c. &c. &c. in the year of our Lord 1835!!

Such, however, is the fact. One of the most *vital* principles of our glorious constitution is—"*that the King never dies.*" Yet, in face of this immortal and gratifytng maxim, Sir Henry Halford had the uncourtly audacity, and the democratic effrontery to declare that, from the post mortem examinations, and the actual evidence of his own senses, he was convinced that Kings do die—have died—and, worst of all, *may* die in future!! Who after this will say that courtiers are prone to flattery? Not only were KINGS reminded of their fate, by the illustrious orator; but the magnates of the earth were apprized that DEATH knocks even at their doors occasionally. Whatever our contemporaries may say to the contrary, we are of opinion that this oration was one of the most moral and useful that was ever delivered in Pall Mall East. TRUTH so rarely reaches the royal ear, or the ears of great men, that Sir Henry Halford deserves great credit for the intrepidity with which he delivered most unwelcome information to an aristocratic audience. Still, the event is pregnant with anticipations of the future. If kings and princes and ministers change their sentiments, fade in their persons, and shuffle off this mortal coil, it is possible that institutions, which are the offsprings of frail humanity, may also obey the same laws—may suffer decay, and ultimately perish—or change their names and nature. We are serious when we express our conviction that the paper of the president was well adapted to the majority of the audience. A dry medical disquisition would have been inappropriate to such an assemblage—and the *morale* of the address was of far more importance than the *physique*.

HENRY the EIGHTH of blessed and pious memory, was proved to be beautiful and manly, by the size of his arm-chair, the picture of Holbein, and the length of the coffin. Although he neither spared man in his anger nor woman in his lust, and was therefore an able auxiliary of that fell destroyer of all things—TIME, yet the old man and his scythe had no respect to the person of the handsome MONARCH. Though a dabbler in physic, he became corpulent and unwieldy—and notwithstanding that he composed a whole pharmacopœia for the benefit of his liege subjects, he got dropsical himself, and died, as history relates, with ulcerated legs, and in great sufferings! The orator humanely passed over the *frailties*—some fastidious historians would call them *crimes*—of the great monarch, and, on the principle—"*de mortuis nil nisi bonum*"—only portrayed his beneficent acts of *dispensation*, in the way of physic, to his subjects.

To his *prime minister* WOLSEY, the amiable sovereign gave some excellent directions how to avoid the *sweating sickness*—an advice which may be necessary, however, unsuccessful, in our own times! But although Wolsey appears to have escaped the epidemic miasm that consigned so many thousands to the tomb, he was unable to resist the *moral* miasma, or *malaria* that issued from the mouth of his gracious master! Nay, it appears that no pestilential breath was necessary. A single glance from the eye of the sovereign gave every courtier his cue, and poor Wolsey found that, had he served his God as faithfully as he had served the vice-gerent of the Deity on earth, his death-bed would have been more happy! Sir Robert Peel, too, may have taken a good moral lesson from this discourse—but he has a better prospect than the Cardinal: he may serve his King and his country, without neglecting his God.

Wolsey's prediction of the time of his own death, and that, too, by dysentery, was a mere chance. No disease is of more uncertain duration than dysentery, and none where the prognosis, as to the period of termination, is more difficult.

In his reflections on the death of EDWARD the SIXTH, Sir Henry paid a tribute to the memory of this intelligent and amiable young monarch, whose mental powers bore no proportion to the weakness of his frame. Sir H. mentioned that he had met with many examples, where ill health had led young persons to great reflection and precocity of intellect—"compensating them for the brevity of their earthly existence!" We too, have seen examples of this kind, but have never found any difficulty in accounting for the phenomena on moral, physical, and physiological principles. Ill health deprives the young person of those exercises and amusements enjoyed by his associates, and he naturally takes to study as a substitute, and in which he finds pleasure and amusement. He therefore makes greater progress than others of his own age, who have health to take corporeal exercise and enjoy juvenile sports. But ill health confers no other advantage on the mind than what results from the above circumstances. Nay, it is often attended with great disadvantages—the mind not unfrequently participating in the maladies of the body, and being rendered incapable of much improvement. Thus any chronic disease of the stomach, the liver, or the head, will render its victim unable to compete with even the dullest person in the possession of health.

CROMWELL's end shewed the ruling passion—enthusiasm, or perhaps an insane belief in supernatural intercourse—even in death. He put more confidence in his own fanaticism—or superstition than in the skill of the doctor—and was, of course, deceived.

King Charles the Second did not die for want of doctors. After the apoplectic seizure he was bled, cupped, purged and *vomited*. He died on the fourth day, though fourteen physicians signed his prescriptions—and although the "*spiritus cranii humani*" formed a component part of the draughts which the merry monarch was doomed to swallow! On examination of the head, "a copious effusion of lymph was found in the ventricles and at the base of the cranium." There is no mention of any sanguineous effusion or clot of blood—nor of any hemiplegia, which would have been the natural consequence of pressure on the opposite side of the brain. The case was evidently serous apoplexy, and the probability is that the fourteen physicians greatly hastened, if they did not occasion, the King's death. It is very rarely that we see any benefit to the patient from multiplicity of councillors. In general, these overgrown councils do much harm. The series of harassing questions that are put to the dying sufferer, only embitter his last moments; and where there are many doctors it is expected that many remedies will be tried, and the wretch's stomach is thus overpowered with physick, when Nature cries for repose to the incapacitated organs of digestion! Such are the fruits of consultations, when the patient is "*in extremis*." In *chronic*, and as they generally are, *incurable* diseases, the matter is very little mended. The patient flies from doctor to doctor, or has one consultation after another, each ending in some new remedy or plan that has not been tried before. The consequences are obvious. The disease is accelerated rather than retarded in its march, and confidence is lost, first in individuals, and ultimately in the whole profession.

In the details of the Duke of Gloucester's last illness and death, Sir Henry incidentally touched on a subject that has caused great error in the minds of philosophers, moralists, and divines. These people, and the world at large, wonder at the great difference, in respect to intellectual composure, exhibited by individuals on their death-beds. This difference depends almost entirely on the organ affected at the conclusion of life. "As the *brain* (says Sir H.) was not affected, his mind was left at liberty to indulge its natural propensity to look into futurity, and to anticipate the fatal issue of the struggle of the body with the disease." But it is not merely the organ affected, but the *way* in which it is affected, that makes the difference. In the present number of the Journal, our readers will have seen the remarkable case of Mr. J. of Portland-place, where the brain was disorganized on one side, yet where the intellects were clear to the last moment. The intellectual *functions* were not disturbed, because there was no fever nor inflammation. The same was seen, on a large scale, in the late epidemic cholera. Those who died in the collapse, retained their faculties till the last, while those who lived till re-action and fever supervened, had their mental faculties disturbed as in any other fever. It is also in meningeal inflammation that the intellectual powers are more particularly involved.

---

### WHY ARE WE RIGHT-HANDED?

The following are the opinions of Sir Charles Bell on this subject. They are, perhaps, more ingenious than conclusive.

"In speaking of the arteries which go to the hand, it may be expected that we should touch on a subject, which has been formerly a good deal discussed, whether the properties of the right hand, in comparison with those of the left, depend on the course of the arteries to it. It is affirmed, that the trunk of the artery going to the right arm, passes off from the heart so as to admit the blood directly and more forcibly into the small vessels of the arm. This is assigning a cause which is unequal to the effect, and presenting, altogether, too confined a view of the subject: it is a participation in the common error of seeking in the mechanism the cause of phenomena which have a deeper source.

"For the conveniences of life, and to make us prompt and dexterous, it is pretty evident that there ought to be no hesitation which hand is to be used, or which foot is to be put forward; nor is there, in fact, any such indecision. Is this taught, or have we this readiness given to us by nature? It must be observed, at the same time, that there is a distinction in the whole right side of the body, and that the left side is not only the weaker, in regard to muscular strength, but also in its vital or constitutional properties. The developement of the organs of action and motion is greatest upon the right side, as may at any time be ascertained by measurement, or the testimony of the tailor or shoemaker; certainly this superiority may be said to result from the more frequent exertion of the right hand; but the peculiarity extends to the constitution also; and disease attacks the left extremities more frequently than the right. In opera dancers we may see that the most difficult feats are performed by the right foot. But their preparatory exercises better evince the natural weakness of the left limb, since these performers are made to give double practice to it, in order to avoid awkwardness in the public exhibition; for if these exercises be neglected, an ungraceful preference will be given to the right side. In walking behind a person, it is very seldom that we see an equalized motion of the body; and if we look to the left foot, we shall find that the tread is not so firm upon it, that the toe is not so much turned out as in the right, and that a greater push is made with it. From the peculiar form of woman, and the elasticity of her step resulting more from the motion of the ankle than of the haunches, the defect of the left foot, when it exists, is more apparent in her gait. No boy hops upon his left foot, unless he be left-handed. The horseman puts the left foot in the stirrup, and springs from the right. We think we may conclude, that every thing being adapted in the conveniences of life to the right hand as, for example, the direction of the worm of the screw or of the cutting end of the auger, is not arbitrary, but is related to a natural endowment of the body. He who is left handed is most sensible to the advantages of this adaptation, from the opening of the parlour door to the opening of a pen-knife. On the whole, the preference of the right hand is not the effect of habit, but is a natural provision, and is bestowed for a very obvious purpose: and the property does not depend on the peculiar distribution of the arteries of the arm—but the preference is given to the right foot, as well as to the right hand."

No one will fail to acknowledge the ingenuity of the foregoing observations; yet we apprehend that some people will not feel quite convinced by the arguments and illustrations. If the superiority of the right side depends inevitably on organization, we cannot conceive how left-handedness could ever obtain. If on the will of our Creator, the difficulty is increased. Are animals right-handed and right-footed? Are not children, from infancy, taught to use the right hand, and put the right foot foremost? It is very true that the two sides of the body are not quite equal in all respects. The right side boasts of a LIVER—but the left has a HEART—which is not inferior to its contemporary in many respects. Suppose Adam and Eve had some theoretical or superstitious predilection in favour of the right hand—and their children continued this predilection. Would not the right hand, in the course of generations, become stronger—originally from exercise, but ultimately from hereditary disposition? Scrofula must have arisen accidentally:—but see how it is transmitted from parent to progeny.

## Anatomy-Bill.

It appears that, at a meeting of medical students in Edinburgh, held on Saturday, the 7th of February, 1835, where nearly 700 individuals attended, a long discussion ensued on the difficulty experienced (in the private schools particularly of anatomy) in the northern metropolis, as to bodies for dissection. The 7th clause, especially, of the anatomy-bill, was blamed as the grand cause of the difficulties in question. This clause leaves it optional with the undertaker, or other person charged with the possession of a dead body, to give up the said body for money, for favour—or not to give it up at all, according to his pleasure or prejudice. The following petition to the Secretary of State was therefore agreed to.

"That this meeting considers the present Anatomy bill defective, inasmuch as it places no restraint on parochial authorities regarding the disposal of their unclaimed dead, and leaves them quite at liberty either to dispose of them as may best serve their own interest, or bury them if they choose to do so; and suggests that it should be made imperative on all parochial authorities, superintendants of hospitals, infirmaries, charities, &c. to forward a notice to the Inspector of Anatomy, of their district, whenever a dead body lies in their possession, under such circumstances as are pointed out by the Act."

There was some discussion as to the propriety of soliciting Mr. Wakley to support the prayer of the petition. On a shew of hands, the great majority was in favour of the solicitation, and it was agreed to accordingly. Some gentleman at the meeting asserted that no difficulties were experienced in Dr. Monro's class, and that this meeting was almost entirely composed of the students of private schools. We regret to learn this state of things in the northern capital. It is said that up to the date of the meeting—when more than half the session had passed away, several hundred students had not had even an extremity for dissection! We fear there is little chance of redress at present. There is not much to be expected from *our* legislature at any time—and less now than ever. The political parties are now so nearly equipotent, that no ministry, whether Whig, Tory, or Radical can have any predominant weight in parliament to carry measures that may be, in the slightest degree, unpopular. A compulsory clause, such as is solicited in the foregoing address, would raise a cry against the minister that brought it in, and therefore we need hardly expect such an amendment to the Act at present.

## HOSPITAL FOR STONE.

An institution for the reception of poor persons suffering from stone has existed in the metropolis now during nearly two years, under the care and at the sole expense of Mr. Costello, and the benefit it has been the means of conferring on numerous persons, has induced several gentlemen to adopt measures for rendering the establishment a permanent one on a larger scale.

The presence of stone in the bladder constitutes one of the most dreadful maladies with which humanity can be afflicted. The unceasing anguish of the disease, the terror which a prospect of the cutting operation inspires, and the danger of that operation when performed, are not surpassed (if equalled) by the incidents of any other affliction.

The extraction of the stone through a deep wound purposely effected in the process of lithotomy has until lately been the only remedy for the disease in its maturity; and although many improvements have been introduced both in the manual part of the operation and the instruments employed, yet the average mortality resulting from its performance, in a large number of cases, including patients of all ages, has been little less than one in four. Humanity, however, might enforce the propriety of concealing the average mortality of lithotomy, were it the sole resource against stone. But thanks to modern surgery, a milder and an incomparably more successful mode of cure has been discovered. Thanks to that distinguished disciple of surgery, CIVIALE, of Paris, lithotrity is fast assuming the laurels which lithotomy could never wear. The reduction of the stone to powder, or small fragments, by means of instruments, which are not larger than common sounds, enables the surgeon to proceed to the cure without bloodshed, with little pain, and almost without danger. Since M. CIVIALE performed his first operation, more than five hundred sufferers have been relieved by lithotrity in France and England, and as a proof of the high opinion entertained of that operation in France, it is only necessary to state, that five years ago an hospital was opened in Paris for its application to the poor. In 1829 Mr. COSTELLO, who had till then been the partner of CIVIALE's labours in France, introduced lithotrity into England, and since that period he has not only considerably improved the process, but has taken unusual pains to make his professional brethren in Great Britain familiar with the operation, describing and performing it gratuitously before them in almost every large town.

But although by these exertions, seconded by the aid of many fellow practitioners, and among others by Mr. KING, in his late "Comparison between Lithotomy and Lithotrity," he has succeeded to a great extent in establishing in the minds of the profession the superiority of lithotrity, yet much remains to be done to render its adoption general, and to confine the painful operation of lithotomy to the few cases in which it presents the only resource. England is not the country in which the merits of such a process can long fail of obtaining for it its due rank among the discoveries of the age, if the opportunity be afforded to the public of advancing its utility. With this persuasion, several gentlemen have resolved to submit to the notice of the humane and benevolent, the infant institution which already exists for the cure of stone, in the hope of being enabled to extend its benefits to the full amount which they are capable of reaching, and thus at once afford extensive relief to calculous patients, and procure the means of materially facilitating the perfection of the operation itself, at the same time rendering to the profession every available opportunity of becoming familiarized with the details and execution of the lithotritic process.

In making this appeal for public support, they beg to submit the following facts:—The average number of cutting operations for stone annually amounts in the London Hospitals to 47, and the estimate for England and Wales, exclusive of the metropolitan institutions, is 64. The total is 111, which, in a population of twelve millions gives one case for every hundred and eight thousand persons. From the 111, forty may be subtracted as cases occurring in children, who cannot at present be regarded as eligible subjects for lithotrity or lithotripsy, but in whom the cutting operation is still demanded. There thus remains an average of but 71 patients, (exclusive of those of Ireland and Scotland) who require an operation to be performed for stone at the public medical institutions of the country.

The number of beds which would be necessary in an hospital of lithotrity to receive all these cases, may be estimated as follows:—If one month be taken as the average duration of the treatment of each case, and the cases occur with uniformity of time, six beds would be sufficient for the purposes of the institution, and in twelve months the whole of the average number of patients could become inmates of the hospital. Supposing, however, this extent of accommodation to be doubled, it is doubtful if in the compass of any establishment so much good could be effected by such trifling means as those which would be sufficient to furnish and provide the proposed hospital.

It is also proposed, as soon as sufficient funds are obtained to extend the objects of the institution to the treatment of some other diseases, which, like stone, require the concentrated care of the surgeon and nurse, and thus to assimilate it to some which exist on the continent, for the especial promotion of medical science, by recording the phases, subjugation or progress of maladies which cannot be so closely watched according to the usual modes of proceeding in large public hospitals. It is calculated that such an establishment in every sense of the word, of the highest value to the community, might be realized at a trifling expense, and it is confidently hoped from the known liberality of the people of this country that so beneficial an addition to our charitable institutions will meet with due support.

The poor will be received as heretofore by Mr. Costello, until such time as the house already hired for the purpose shall have undergone the necessary alterations.

DR. JAMES JOHNSON, *Physician.*
MR. COSTELLO and } *Surgeons*
MR. KING }

---

## BIBLIOGRAPHICAL RECORD;

OR,

*Works received for Review since our last.*

1. The Practice of the Liverpool Ophthalmic Infirmary, for the Year 1834; being the first Special Report. By Hugh Neill, Surgeon to the Charity. Octavo, pp. 54, with Plate.

---

2. An Exposition of the Nature and Treatment of Continued Fever. By Henry M'Cormac, M.D. Octavo, pp. 202. Longman and Co. 1835.

---

3. A Treatise on Rickets; with a new Theory of Ossification, and a Plate and Description of an improved reclining Couch for the Distorted. By Geo. Hume Weatherhead, M.D. &c. Small 8vo, pp. 128. Second Ed. Highley, 1835.

---

4. Observations on the Causes and Treatment of Ulcerous Diseases of the Leg. By J. C. Spender, M.R.C.S. Octavo, pp. 210. Longman and Co. 1835.

---

5. A Series of Anatomical Plates, &c. By Jones Quain, M.D. Fasciculus 22—33. Division I., the Muscles. March, 1835.

☞ *We shall notice these fully in our next.*

---

6. Lectures on the Morbid Anatomy, Nature and Treatment of Acute and Chronic Diseases, delivered in the Theatre of Anatomy, Webb-st. by the late John Armstrong, M.D. Edited by Joseph Rix, M.R.C.S. Octavo, pp. 851. Baldwin and Co. Paternoster-row. April, 1834.

☞ *By some accident, this valuable copy of Dr. Armstrong's Lectures was omitted in our Bibliographical Record. Mr. Rix, a very talented young surgeon, was induced during several courses to take careful notes of Dr. Armstrong's lectures—so careful, copious, and exact were they, that the late lamented lecturer solicited the loan of them from the editor, during his illness, that they might be read to his pupils, when he was unable to deliver them* viva voce. *This fact is attested by Dr. Armstrong himself, in a letter to Mr. Rix, and after such a testimony in favour of the correctness, fidelity, and amendments of the lectures, it would be folly to add a single word by way of recommendation.*

7. The Principles of Physiology, applied to the Preservation of Health, and the Improvement of Physical and Mental Education. By A. Combe, M.D. Third Edition, revised and enlarged, 1835.

☞ *The fact of a work coming to a third edition in eleven months speaks volumes.*

---

8. The Nature of Cholera investigated. By John George French, M.R.C.S. &c. Octavo, pp. 54. Rivingston's, Feb. 1835.

---

9. A Treatise on Insanity, and other Disorders affecting the Mind. By James Cowles Prichard, M.D. Senior Physician to the Bristol Infirmary. Octavo, pp. 483. Sherwood and Co. March, 1835.

---

10. The Epidemics of the Middle Ages; from the German of J. F. C. Hecker, M.D. Translated by B. G. Babington, M.D. FRS. Small 8vo. pp. 195. Sherwood and Co. March, 1835.

---

11. Outlines of Comparative Anatomy. By Robert E. Grant, M.D. Professor of Comparative Anatomy and Zoology in the University of London, &c. *Part the First,* containing Osteology, Ligaments, and Muscles, illustrated with 65 Wood-cuts. Octavo, pp. 144. Bailliere, Regent-street, March 1, 1835. Price seven shillings.

☞ *As this estimable Work is now publishing in parts, and at a cheap rate, we strongly recommend it to all those who wish to take a comprehensive view of comparative anatomy.*

---

12. Descriptive Catalogue of the Preparations in the Museum of the Royal College of Surgeons in Ireland. By John Houston, M.D. &c. Octavo, pp. 248. Dublin, 1835.

☞ *A valuable vade-mecum for the professional visitor of the Museum.*

---

13. Cyclopædia of Practical Medicine, Part XXV. containing articles on Worms, Wounds, Yaws, Constipation, Hæmorrhoids, Liver-Diseases, Porrigo, Prurigo,

Rupture of Heart, Diseases of Spinal Marrow, Stomach, Tetanus, Med. Bibliography.

☞ *There is but one more Part to conclude this national and highly valuable publication.*

---

14. Pathological Researches on Phthisis. By E. Ch. A. Louis, M.D. Physician to La Pitié in Paris. Translated from the French, with Introduction, Notes, Additions, and an Essay on Treatment. By Charles Cowan, M.D. &c. Octavo, pp. 388. E. Portwine, London, March, 1835.

---

15. De l'Emploi de l'Excision, et de la Cauterization, à l'Aide du Nitrate de l'Argent, fondu dans l'Opthalmie Blennorrhagique, &c. Par E. T. Julliard, de Geneve, Quarto, pp. 88. Paris, 1835.

---

16. Principles and Practice of Obstetric Medicine, &c. By Dr. Davis. Part 40. March, 1835.

---

17. Lectures on the Means of promoting and preserving Health, delivered at the Mechanic's Institution, Spitalfields. By T. Hodgkin, M.D. Small 8vo, pp. 449. March, 1835.

☞ *These lectures are exceedingly well adapted for the non-professional reader, especially for those of the working-classes. They are by no means unworthy of professional perusal also.*

---

18. The Phrenological Journal and Miscellany, No. 43. March 1, 1835.

---

19. A Compendium of the Diseases of the Skin, with Cases; including a particular Consideration of the more frequent and intractable forms of these Affections. By Jonathan Green, M.D. M.R.C.S. Octavo, pp. 371. Whitaker, London, March, 1835.

---

20. The Cyclopædia of Practical Medicine and Surgery—a Digest of Medical Literature. Edited by Isaac Hays, M.D. Part I. Philadelphia, July, 1833. Octavo, pp. 108, double columns.

☞ *It is expected that this work will be comprised in eight volumes, being compiled from the various dictionaries of medicine, English and foreign.*

---

21. Anatomical Description of the Parts concerned in Inguinal and Femoral Hernia. Translated from the French of M. Jules Cloquet, with Lithographic Plates, &c. By A. Melville M'Whinnie, Assistant-Teacher of Practical Anatomy, at St Bartholomew's Hospital. Octavo, pp. 50. Highley, Dec. 1834.

---

22. An Essay on the Use of Liquor Potassæ and Liquor Alkalinus in the Treatment of Malignant Cholera. By Henry W. Dodd, M.R.C.S. Durham, 1834. pp. 33.

---

23. The Anatomy, Physiology, and Diseases of the Teeth. By Thos. Bell, F.R.S. &c. Second Edition, Dec. 1834. Highley.

---

24. On the Preparation and Medicinal Employment of Aconitine, by the Endermic Method, in the Treatment of Tic Douloureux and other Painful Affections. By Alex. Turnbull, M.D. Octavo, pp. 48. Longman and Co.

---

25. A familiar Description of the Nature, Symptoms, and ordinary Modes of Treatment of Cataract, &c. By John Stevenson, Esq. &c. 1834.

---

26. The Pathology and Diagnosis of the Chest; illustrated by a Rational Exposition of their Physical Signs. By Charles J. B. Williams, M.D. Third Edition, with important Additions, and with new Researches on the Sounds of the Heart.

---

27. The Marriage Almanack; or Ladies' Perpetual Calendar, in which every Day of the Year is marked with Reference to its important Epochs. Translated from the French of Dr. Desberger, by an English Physician. 12mo. Schloss, April, 1835.

---

28. A brief Account of the Origin and Progress of the Patent Syringe, or Stomach Pump, &c. By John Read, Regent Circus, Piccadilly. Octavo, pp. 79. March, 1835.

☞ *We have also received from Mr. Read a small instrument, "on his new patent principle, with flexible rectum-tube, &c." which we understand has been highly approved by Sir B. Brodie, Mr. Guthrie, and Mr. Earle. It appears to be very perfect and ingenious in its mechanism.*

---

29. Illustrations of the Elementary Forms of Disease. By Robert Carswell, M.D. Fasciculus VII.—Mortification.

---

30. Fasciculus 24 of Dr. Quain's Anatomical Plates is just received.

## EXTRA-LIMITES.

### Cholera.

1. The Nature of Cholera Investigated. By J. G. French, M.R.C.S.

2. An Essay on the Use of the Liq. Potassæ and Liquor Alkalinus in the Treatment of Malignant Cholera. By Henry Wilkinson Dodd, M.R.C.S.

The choleraphobia lasted even a shorter time than the epidemic itself. The monster, at a distance, was TERRIFIC—and, we must acknowledge that, even when calmly viewed in its just dimensions and proportions, it was a formidable visitor to these peaceful shores. Yet it is astonishing how soon we became familiarised with its presence, and released from inordinate apprehension, when it was actually before our eyes. This philosophic tranquillity was not a little hastened and matured by the assertions of the anti-contagionists, who divested the scourge of more than half its terrors, by stripping it of its preconceived powers of propagating itself from person to person by contact. We believe few, even of our opponents, will deny that this Journal contributed its mite to the consummation of this tranquillity—and still fewer will now raise the cry of contagion, or advocate the system of quarantine and seclusion. But although fear has subsided, all danger is not over. It is probable that the epidemic will return, for a year or two more, in the warm weather, though in gradually diminishing intensity, till it ceases altogether, and shall only be known by history. On this account we shall continue to take brief notice of such publications as may come forth on the subject of cholera.

A great portion of Mr. French's pamphlet is occupied with physiological and pathological discussions on the cause and nature of the disease. The whole theory may be condensed into the following two or three lines. "Thus then we have endeavoured to shew that cholera is produced by a poison, the specific effect of which is to paralyze the heart." If then, says our author, paralysis of the heart be the disease, and the removal of the cause be out of our power, what is to be done? Arguing on its analogy with other acute paralysis, he proposes to diminish the quantity of the circulating fluid, and to effect changes in the blood that remains.

We need not follow our author any farther. We conceive that he has taken a wrong view of the disease. We know nothing of the primary cause; but we know that its first effect is to cause a *serous* hæmorrhage from the stomach and bowels, by which loss of the serous part of the blood, the remainder becomes black and thick—and *then* the heart is unable to circulate the fluid. The patient then dies in the collapse; or, if the hæmorrhage ceases, and the heart is unable to carry on a languid circulation till re-action takes place, we have the choleric fever. Stop this serous hæmorrhage in time and you will save 99 out of the 100 cholera cases. Mr. French's pamphlet is, however, well written, and the reasoning is very ingenious.

Mr. Dodd, a medical practitioner in Durham, informs us that he has been very successful with a particular remedy, and has properly communicated that remedy and the mode of using it, to the public. Mr. D. does not believe that cholera can be communicated from one individual to another. He thinks it was "originally borne to this country by a column of infected matter, and has again been communicated from district to district, by the same means of progression." We doubt this theory, though we cannot disprove it. We think it much more probable that the cause of cholera, whatever it was, originated on the spot where it shewed itself. The circumstance of its inability to cross the bridge of Sunderland for a long time, is a stumbling-block to more than one theory. But leaving this subject altogether, we come to the treatment. Our author after some ineffectual attempts to check cholera by the common means, came to the resolution of trying the *liquor potassæ*, on the principle of neutralizing some acid in the primæ viæ. The dose was usually about twenty drops in white of egg, repeated in larger quantities, if necessary, till the disease was subdued. Latterly he made use of a composition which he terms "LIQUOR ALKALINUS," composed of eight parts of the liquor potassæ, twelve of "liquor sodæ," and four compound spirit of lavender. The liq. sodæ he made in the same way as the College directs the liq. potasse to be made. The dose of this compound is larger than that of the liq. potassæ alone. Our author assures us "that the *liq. potassæ and liq. alkalinus* have never yet failed in checking the ricy dejections and ejections of cholera." It generally forms a concrete mass with white of egg, and from 20 to 60 drops were given for a dose. After the discharges of serum from the stomach and bowels were arrested by the medicine, two or three grains of calomel were given every hour until a dark viscid stool was produced. He prevented the patients from taking cold water, for which there is such avidity. We hope the remedy will be tested, should the disease recur in this country.

### HORNE'S ACETUM OPII SEDATIVUM.

*To the Editors of the Med. Chir. Review.*

Gentlemen.—I shall feel obliged by your publishing in your valuable Review the mode of preparing the "ACETUM OPII SEDATIVUM," since the means I have pursued for giving it publicity have in part failed, scarcely a day passing without my being requested to point out where it can be procured. The formulary is as follows. I take three times the quantity of opium, ordered by the London Pharmacopœia for making two pints of tincture, mix the opium into a paste with two pints of distilled vinegar and set it by for a few hours; then add a sufficient quantity of alcohol, to extract the remaining virtues of the opium, macerate, and filter. Then introduce the liquor into a retort and distil off the whole of the spirit, (which is saved) and the product in the retort is the required preparation.

There are many practitioners who have conceived that I have "arrogated to myself the fond hope" of placing the acet. op. sed. in competition with morphine. In reply I may briefly state that my first object in introducing it was to endeavour to obtain for the sedative treatment in mania melancholia or puerperal mania, some stronger proof, than simply the detail of a few successful cases, without which, few practitioners would perhaps from my recommendation have heeded it. But now I can state, and "have proofs to prove," that many eminent physicians in this metropolis, and in many distant parts of the country are giving both a fair trial. The second object was either to elicit from Mr. Battley, the method for making his long promised liquor opii sedativus, or to do away with it altogether. The latter object, I believe, will be accomplished; for not one medical gentleman, as yet, who has favoured me by prescribing mine, but has given it the decided preference. Professor Thompson, in the course of a few days, will communicate the results of his experiments in the laboratory and at the bed side.

There are various objections that I might (had I been inclined) urge against the preparations of morphine mostly in use; but mark, not against the action of morphine. 1st. Dr. Turner states "To procure the acetate of morphia in the solid state, it must be evaporated to dryness, and in this process some of its acid is usually expelled. It is deliquescent, and is hence with difficulty preserved in a constant state of dryness; and when neutral it is decomposed by water, whereby part of the morphia is rendered insoluble. In fact, the best mode of employing the acetate is to dissolve given weights of morphia in dilute acetic acid, and preserve it in that form, taking care that the acid is in excess." Query, is not this my preparation? without the trouble or expense of making morphia, and as there are but few manufacturers of it, so it is in proportion adulterated, for it may be procured at the wholesale druggists for 15s. per oz. and for two guineas per oz.

I am gentleman,
Your obedient and obliged
Servant,
J. H. HORNE, Surgeon, &c.
5, *Gerrard-street*, *Soho*,
*20th February*, 1835.

## ADVANTAGES OF MEDICAL SOCIETIES.

In the last annual report of the Hunterian Society (now held at No. 4, Blomfield-street, Finsbury), there are some excellent observations on the benefits which result to the members of medical societies, by periodical associations and free discussions. We shall here present an extract, concurring fully, as we do, in the truth and justice of the remarks.

"The association of medical men for purposes of free discussion has had the sanction of the highest authorities in the profession;—of those who have felt the necessity of maintaining the spirit of observation and research. It has had the sanction of those who have appreciated the importance of concentrating cases, and of submitting them to candid examination, and of bringing opinions under free comparison, that error may be detected, mystery unravelled, and accuracy established.

The successive Reports of this Society have adverted to these advantages, and it is with no small pleasure that your Council on this occasion, can bear testimony that the unrestrained association of practitioners, in all branches of medical occupation, for conversation on questions of science, arising out of daily intercourse with the sick and injured in hospitals, dispensaries, and in private life, continues to be felt, in an increasing degree, from the Society's meetings."

"Those who have attended the meetings have often realized the utility of social inquiries in this respect. The correction of error, and the consolidation of truth have been interwoven with the dissemination of knowledge. The results of researches, bearing on the same point, but conducted by different hands, and under variety of circumstances, have been compared and imbodied, and have left a sequence of caution or of confidence in the application of doubtful remedies." "Sterile hypothesis, and fanciful speculations, have been shunned, but there has been no avoidance of sound theories, nor any prohibition of that freedom of discussion which, whilst it recognized the basis on which medical opinions can only be safely built, points out defects in admitted theories, or suggests some clearer explanation of the phenomena of disease.

In this way, pre-eminently, is acquired a facility of associating facts, some having shades of difference, but essentially the same; and of discriminating those in which, with some analogy, there are essential discrepancies.

It has often been found highly satisfactory, in the perplexities and responsibilities of practice, to take advantage of the law of combination. The principles which actuate the physician have been combined with those which actuate the surgeon, and one department has thrown light upon the other. A doubt not explicable by the mind in which it originated, but apparently augmenting by the train of anxious thought to which it gave occasion, often receives sudden dispersion on being communicated to another. A mere hint not unfrequently sheds a flood of light, which is like the bursting forth of the sun through a dense cloud. The path which before was intricate and perilous, now lies open to the traveller; surrounding objects have a new aspect; the inward emotions assume a more joyful character, and the intellect is inspired with fresh energy for successful action."

We have wondered at the apathy evinced by many members of the profession in their unwillingness to join in these associations. For our own parts, we can safely aver that, after nearly 40 years of study and experience, in all departments of our profession, we never leave a medical society (and we are members of several) without having made some acquisition to our stock of knowledge. We pity those who think that, after being a few years settled in practice—and especially after having acquired reputation and riches—they are merely wasting time, or acting *infra dignitatem*, if they appear among their brethren, particularly their junior brethren, to communicate and receive information—to discuss different points of theory and practice, and to have the rough angles of self-sufficiency ground down by intercourse with their equals or superiors. We tell these MAGNATES that they do not know their own interest, nor consult the interests of their brethren. If they are wiser or more experienced than their neighbours, they ought to be proud and happy to communicate the overplus of their knowledge to the many needy seekers after information:—if they are below par, they would evince wisdom in *listening*, if they have not the power or the inclination to dispense the fruits of their experience. The very circumstance of becoming personally acquainted with our brethren is no mean advantage accruing from these associations; and therefore do we earnestly exhort the members of our profession to avail themselves of the benefits they confer, and contribute their support to the institutions in their neighbourhood.

### NEW SCHOOL OF ANATOMY IMMEDIATELY ADJOINING ST. GEORGE'S HOSPITAL.

A notice of the opening of this school for anatomical lectures and demonstrations will be found in the Intelligence department of the present number. As the Junior Editor is one of the lecturers of the establishment, he may perhaps be permitted to observe to the country readers of this Journal, that every arrangement has been made to ensure the comforts and preserve the health of the pupils. The dissecting-room is one of the most spacious, the best lit, and best ventilated in London, or perhaps in any country; and the various accommodations are such as are worthy of the extensive hospital to which it is contiguous. No expense has been, and no pains will be, spared to secure the conveniences, and promote the advancement of those gentlemen who may honour the lecturers with their attendance in the ensuing season.

INDIGESTION—CHANGE OF AIR—TOUR OF HEALTH.

AN ESSAY on INDIGESTION, or MORBID SENSIBILITY of the STOMACH and BOWELS, as the Source of various Diseases, mental and corporeal. By JAMES JOHNSON, M.D. Physician Extraordinary to the KING. *Eighth Edition, price* 6*s*. 6*d*.

BY THE SAME AUTHOR,

2. CHANGE of AIR; or PURSUIT OF HEALTH, through France, Switzerland, and Italy. *New Edition, greatly enlarged, price* 8*s*. 6*d*.

(Sequel to "CHANGE OF AIR.")

3. THE RECESS; a Tour of Health and Pleasure to the Highlands and Islands. *Price* 7*s* 6*d*. Highley, 32, Fleet-street.

**CRITICAL NOTICES.**

"Of all the popular Tours of which British literature has recently been so prolific, this is immeasurably the best. To attempt an analysis of a work embracing such a treasure of anecdote and instruction, would be an idle task. There is no class of general readers which may not derive pleasure and profit from the perusal of this volume."—*Ballot.*

"Dr. Johnson is a vigorous and independent thinker, while his opinions are slightly tinctured with cynicism, which gives them an agreeable relish. His style is clear, bold, and expressive; so that when he least aims to effect, he leaves a more vivid impression on us of the object of his reflections, than others would by an elaborate description."—*Morning Herald.*

"The Author, out of his abundant stock of knowledge and reflection, has constructed a volume with which all classes will be pleased."—*Atlas.*

"The medical portion embraces numerous remarks which we would recommend all invalids and their medical advisers to peruse, before they decide upon the dangerous experiment of foreign travel."—*Spectator.*

"In his description of the different countries he passed through, and the many objects of curiosity that attracted his notice, Dr. Johnson has preserved a freshness and originality that reflect high credit upon his talent, as a writer and acute observer."—*London Med. and Phys. Journal.*

"The present publication is the most entertaining and edifying that has issued from the press for many years."—*Gazette of Health.*

THE RECESS.

"I must say I never saw more various—I might add, profound research so pleasantly seasoned with satire."—*Author of Tremaine.*

BINDING LIST NOV 1 - 1943

Biological
& Medical
Serials

412961

Medico-Chirurgical Review(American reprint)
N.S.Vol.22 (Oct.1,1834-Mar.31,1835)

P
Med
M

University of Toronto
Library

Biological
& Medical
Serials

DO NOT
REMOVE
THE
CARD
FROM
THIS
POCKET

Acme Library Card Pocket
LOWE-MARTIN CO. LIMITED